

SEQLIST-20480.TXT

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Lys Asp Leu Pro Lys Glu Ile Thr Val Ala Thr Ser Arg Thr Leu Ser  
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<211> 422  
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<213> SARS coronavirus

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Gly Gly Asp Gly Lys Met Lys Glu Leu Ser Pro Arg Trp Tyr Phe Tyr  
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 <213> SARS coronavirus

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Asn Tyr Gln Val Asn Gly Tyr Pro Asn Met Phe Ile Thr Arg Glu Glu  
20 25 30

Ala Ile Arg His Val Arg Ala Trp Ile Gly Phe Asp Val Glu Gly Cys  
35 40 45

His Ala Thr Arg Asp Ala Val Gly Thr Asn Leu Pro Leu Gln Leu Gly  
50 55 60

Phe Ser Thr Gly Val Asn Leu Val Ala Val Pro Thr Gly Tyr Val Asp  
65 70 75 80

Thr Glu Asn Asn Thr Lys Phe Thr Arg Val Asn Ala Gln Thr Ser Thr  
85 90 95

Ser Glu Gln Phe Lys His Leu Ile Pro Leu Met Tyr Lys Gly Leu Pro  
100 105 110

Trp Asn Val Val Arg Ile Lys Ile Val Gln Met Leu Ser Asp Thr Leu  
115 120 125

Lys Gly Leu Ser Asp Arg Val Val Phe Val Leu Trp Ala His Gly Phe

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130

135

140

Glu Leu Thr Ser Met Lys Tyr Phe Val Lys Ile Gly Pro Glu Arg Thr  
145 150 155 160

Cys Cys Leu Cys Asp Lys Arg Ala Thr Cys Phe Ser Thr Ser Ser Asp  
165 170 175

Thr Tyr Ala Cys Trp Asn His Ser Val Gly Phe Asp Tyr Val Tyr Asn  
180 185 190

Pro Phe Met Ile Asp Val Gln Gln Trp Gly Leu Tyr Gly  
195 200 205

<210> 9998  
<211> 23  
<212> PRT  
<213> SARS coronavirus

<400> 9998  
Pro Phe Arg Val Thr Met Thr Asn Ile Ala Arg Tyr Met Glu Met His  
1 5 10 15

Met Trp Ala Ser Cys Asp Ala  
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<210> 9999  
<211> 16  
<212> PRT  
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<400> 9999  
Pro Thr Cys Ala Phe Pro Cys Thr Trp Gln Cys Trp Ser Trp Leu Leu  
1 5 10 15

<210> 10000  
<211> 13  
<212> PRT  
<213> SARS coronavirus

<400> 10000  
Lys Val Thr Arg Lys Ala Pro Thr Ala Glu His Gln Ser  
1 5 10

<210> 10001  
<211> 21  
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<400> 10001  
Met Gly Tyr Arg His Ser Gln Asn Pro Gln Asn Asp Ser Ser Arg His  
1 5 10 15

Lys Tyr Leu Met Lys  
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<210> 10002  
<211> 18  
<212> PRT  
<213> SARS coronavirus

<400> 10002

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Lys Ser Lys Leu His Val Cys His Thr Asp Asn Thr Phe Phe Gln Val  
1 5 10 15

Gln Ser

<210> 10003  
<211> 6  
<212> PRT  
<213> SARS coronavirus

<400> 10003  
Gln Ser Thr Ser Leu Met  
1 5

<210> 10004  
<211> 21  
<212> PRT  
<213> SARS coronavirus

<400> 10004  
Ala Gln Ser His Ala Pro Lys Gly Arg Thr Arg Leu Cys Leu Thr Ile  
1 5 10 15

Leu Ser Val Tyr His  
20

<210> 10005  
<211> 5  
<212> PRT  
<213> SARS coronavirus

<400> 10005  
Ala Phe Val Leu Ser  
1 5

<210> 10006  
<211> 11  
<212> PRT  
<213> SARS coronavirus

<400> 10006  
Tyr Ala Leu His Ser Arg Ala Ser Leu Tyr Thr  
1 5 10

<210> 10007  
<211> 9  
<212> PRT  
<213> SARS coronavirus

<400> 10007  
Thr Ala His Trp Trp Arg Phe Val His  
1 5

<210> 10008  
<211> 17  
<212> PRT  
<213> SARS coronavirus

<400> 10008  
Ile Leu Cys Tyr Phe Gln Cys Gln His Asn Gln Ser Val Gln Leu Leu  
1 5 10 15

Ser

<210> 10009  
 <211> 8  
 <212> PRT  
 <213> SARS coronavirus

<400> 10009  
 Lys Ile Leu Ala Gly Glu Val Gly  
 1 5

<210> 10010  
 <211> 5  
 <212> PRT  
 <213> SARS coronavirus

<400> 10010  
 Tyr Pro Gln His Leu  
 1 5

<210> 10011  
 <211> 17  
 <212> PRT  
 <213> SARS coronavirus

<400> 10011  
 Leu His Asp Ser Pro Leu His Gln Ser Gln Ser Thr His Glu Arg Asp  
 1 5 10 15

Glu

<210> 10012  
 <211> 4  
 <212> PRT  
 <213> SARS coronavirus

<400> 10012  
 Leu Leu Arg Gly  
 1

<210> 10013  
 <211> 5  
 <212> PRT  
 <213> SARS coronavirus

<400> 10013  
 Leu Gly Asn Ser Phe  
 1 5

<210> 10014  
 <211> 8  
 <212> PRT  
 <213> SARS coronavirus

<400> 10014  
 Val Tyr Val Gly His Val Leu Trp  
 1 5

<210> 10015  
 <211> 54  
 <212> PRT

SEQLIST-20480.TXT

<213> SARS coronavirus

<400> 10015

Ser Ile Thr Thr Ser Pro His Val His Phe His Val Pro Gly Asn Val  
1 5 10 15

Gly His Gly Tyr Ser Glu Arg Leu Pro Val Lys Pro Pro Leu Leu Asn  
20 25 30

Ile Asn His Lys Trp Val Ile Asp Ile Val Lys Thr His Arg Met Ile  
35 40 45

Pro Ala Gly Ile Ser Ile  
50

<210> 10016

<211> 25

<212> PRT

<213> SARS coronavirus

<400> 10016

Ser Arg Lys Ala Ser Cys Thr Phe Val Thr Gln Thr Thr Arg Ser Phe  
1 5 10 15

Arg Ser Asn Leu Asp Lys Val Leu His  
20 25

<210> 10017

<211> 15

<212> PRT

<213> SARS coronavirus

<400> 10017

Cys Lys Leu Lys Ala Met Arg Pro Lys Asp Glu His Asp Ser Val  
1 5 10 15

<210> 10018

<211> 60

<212> PRT

<213> SARS coronavirus

<400> 10018

Gln Ser Phe Gln Cys Ile Thr Glu His Leu Tyr Tyr Leu Asn Thr His  
1 5 10 15

Tyr Ile Pro Gly Gln Ala Phe Ile His Glu Trp Tyr Lys Met Phe Lys  
20 25 30

Leu Leu Thr Gly Gly Gly Leu Cys Ile Asn Ser Gly Glu Phe Cys Val  
35 40 45

Ile Phe Ser Val Asn Ile Thr Ser Arg Tyr Ser Tyr  
50 55 60

<210> 10019

<211> 7

<212> PRT

<213> SARS coronavirus

<400> 10019

Val Asn Thr Cys Arg Lys Ser  
1 5



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<210> 10020  
 <211> 53  
 <212> PRT  
 <213> SARS coronavirus

<400> 10020  
 Val Ser Thr His Ser Ile Ser Ser Cys Met Thr Ala Leu Tyr Ile Lys  
 1 5 10 15  
 Ala Asn Pro Arg Thr Asn Val Thr Asn Ser Phe Phe Ala Gly Asp Lys  
 20 25 30  
 His Ile Arg Val Thr Ile Asp Leu Val Ile His Phe Glu Thr His His  
 35 40 45  
 Arg Asp Glu Ser Thr  
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<210> 10021  
 <211> 4  
 <212> PRT  
 <213> SARS coronavirus

<400> 10021  
 Val Met Ser Phe  
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<210> 10022  
 <211> 25  
 <212> PRT  
 <213> SARS coronavirus

<400> 10022  
 Ala Ser Gln Leu Ala His Met Cys Ile Ser Met Tyr Leu Ala Met Leu  
 1 5 10 15  
 Val Met Val Thr Leu Lys Gly Tyr Pro  
 20 25

<210> 10023  
 <211> 4  
 <212> PRT  
 <213> SARS coronavirus

<400> 10023  
 Ser Pro His Cys  
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<210> 10024  
 <211> 7  
 <212> PRT  
 <213> SARS coronavirus

<400> 10024  
 Thr Ser Ile Ile Asn Gly Leu  
 1 5

<210> 10025  
 <211> 5  
 <212> PRT  
 <213> SARS coronavirus

<400> 10025

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Ser Lys Pro Thr Glu  
1 5

<210> 10026  
<211> 4  
<212> PRT  
<213> SARS coronavirus

<400> 10026  
Phe Gln Gln Ala  
1

<210> 10027  
<211> 99  
<212> PRT  
<213> SARS coronavirus

<400> 10027  
Val Ser Asp Glu Val Glu Lys Gln Val Ala Arg Leu Ser His Arg Gln  
1 5 10 15

His Val Leu Ser Gly Pro Ile Leu Thr Lys Tyr Phe Ile Asp Val Ser  
20 25 30

Ser Lys Pro Cys Ala Gln Arg Thr Asn Thr Thr Leu Ser Asp Asn Pro  
35 40 45

Phe Ser Val Ser Leu Ser Ile Cys Thr Ile Leu Ile Arg Thr Thr Phe  
50 55 60

Gln Gly Lys Pro Leu Tyr Met Ser Gly Ile Arg Cys Leu Asn Cys Ser  
65 70 75 80

Leu Val Glu Val Cys Ala Leu Thr Leu Val Asn Phe Val Leu Phe Ser  
85 90 95

Val Ser Thr

<210> 10028  
<211> 28  
<212> PRT  
<213> SARS coronavirus

<400> 10028  
Pro Val Gly Thr Ala Thr Lys Leu Thr Pro Val Glu Asn Pro Ser Trp  
1 5 10 15

Arg Gly Arg Leu Val Pro Thr Ala Ser Leu Val Ala  
20 25

<210> 10029  
<211> 12  
<212> PRT  
<213> SARS coronavirus

<400> 10029  
Gln Pro Ser Thr Ser Lys Pro Ile His Ala Arg Thr  
1 5 10

<210> 10030  
<211> 12  
<212> PRT

SEQLIST-20480.TXT

<213> SARS coronavirus

<400> 10030

Arg Ile Ala Ser Ser Arg Val Ile Asn Ile Leu Gly  
1 5 10

<210> 10031

<211> 4

<212> PRT

<213> SARS coronavirus

<400> 10031

Pro Leu Thr Trp  
1

<210> 10032

<211> 17

<212> PRT

<213> SARS coronavirus

<400> 10032

Phe Ile Leu Lys Pro Ile Ile Glu Met Ser Leu Arg Arg Ser Cys Pro  
1 5 10 15

Leu

<210> 10033

<211> 302

<212> DNA

<213> Artificial Sequence

<220>

<223> BNI-1 amplicon

<400> 10033

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aataatgttta	tcacccgcga	agaagctatt	cgtcacgttc	gtgcgtggat	tggttttgat	120
gtagagggct	gtcatgcaac	tagagatgct	gtgggtacta	acctacctct	ccagctagga	180
ttttctacag	gtgttaactt	agtagctgta	ccgactgggt	atgttgacac	tgaaaataac	240
acagaattca	ccagagttaa	tgcaaaacct	ccaccaggtg	accagtttaa	acatcttata	300
cc						302

<210> 10034

<211> 100

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10034

Tyr Arg Arg Leu Ile Ser Met Met Gly Phe Lys Met Asn Tyr Gln Val  
1 5 10 15

Asn Gly Tyr Pro Asn Met Phe Ile Thr Arg Glu Glu Ala Ile Arg His  
20 25 30

Val Arg Ala Trp Ile Gly Phe Asp Val Glu Gly Cys His Ala Thr Arg  
35 40 45

Asp Ala Val Gly Thr Asn Leu Pro Leu Gln Leu Gly Phe Ser Thr Gly  
50 55 60

SEQLIST-20480.TXT

Val Asn Leu Val Ala Val Pro Thr Gly Tyr Val Asp Thr Glu Asn Asn  
65 70 75 80

Thr Glu Phe Thr Arg Val Asn Ala Lys Pro Pro Pro Gly Asp Gln Phe  
85 90 95

Lys His Leu Ile  
100

<210> 10035  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10035  
Thr Val Asp Ser Ser Leu  
1 5

<210> 10036  
<211> 4  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10036  
Trp Val Ser Lys  
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<210> 10037  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10037  
Ile Thr Lys Ser Met Val Thr Leu Ile Cys Leu Ser Pro Ala Lys Lys  
1 5 10 15

Leu Phe Val Thr Phe Val Arg Gly Leu Ala Leu Met  
20 25

<210> 10038  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10038  
Arg Ala Val Met Gln Leu Glu Met Leu Trp Val Leu Thr Tyr Leu Ser  
1 5 10 15

Ser

SEQLIST-20480.TXT

<210> 10039  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10039  
 Asp Phe Leu Gln Val Leu Thr  
 1 5

<210> 10040  
 <211> 32  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10040  
 Leu Tyr Arg Leu Val Met Leu Thr Leu Lys Ile Thr Gln Asn Ser Pro  
 1 5 10 15  
 Glu Leu Met Gln Asn Leu His Gln Val Thr Ser Leu Asn Ile Leu Tyr  
 20 25 30

<210> 10041  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10041  
 Thr His Leu Tyr Asp Gly Phe Gln Asn Glu Leu Pro Ser Gln Trp Leu  
 1 5 10 15

Pro

<210> 10042  
 <211> 18  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10042  
 Tyr Val Tyr His Pro Arg Arg Ser Tyr Ser Ser Arg Ser Cys Val Asp  
 1 5 10 15

Trp Leu

<210> 10043  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

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<220>
<223>   Inferred translation product

<400>   10043
Cys Arg Gly Leu Ser Cys Asn
1           5

<210>   10044
<211>   5
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Inferred translation product

<400>   10044
Arg Cys Cys Gly Tyr
1           5

<210>   10045
<211>   11
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Inferred translation product

<400>   10045
Pro Thr Ser Pro Ala Arg Ile Phe Tyr Arg Cys
1           5           10

<210>   10046
<211>   9
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Inferred translation product

<400>   10046
Leu Ser Ser Cys Thr Asp Trp Leu Cys
1           5

<210>   10047
<211>   6
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Inferred translation product

<400>   10047
His Arg Ile His Gln Ser
1           5

<210>   10048
<211>   6
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Inferred translation product

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SEQLIST-20480.TXT

<400> 10048  
Cys Lys Thr Ser Thr Arg  
1 5

<210> 10049  
<211> 4  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10049  
Thr Ser Tyr Thr  
1

<210> 10050  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10050  
Gly Ile Arg Cys Leu Asn Trp Ser Pro Gly Gly Gly Phe Ala Leu Thr  
1 5 10 15

Leu Val Asn Ser Val Leu Phe Ser Val Ser Thr  
20 25

<210> 10051  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10051  
Pro Val Gly Thr Ala Thr Lys Leu Thr Pro Val Glu Asn Pro Ser Trp  
1 5 10 15

Arg Gly Arg Leu Val Pro Thr Ala Ser Leu Val Ala  
20 25

<210> 10052  
<211> 12  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10052  
Gln Pro Ser Thr Ser Lys Pro Ile His Ala Arg Thr  
1 5 10

<210> 10053  
<211> 12  
<212> PRT  
<213> Artificial Sequence

SEQLIST-20480.TXT

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<220>
<223>   Inferred translation product

<400>   10053
Arg Ile Ala Ser Ser Arg Val Ile Asn Ile Leu Gly
1          5          10

<210>   10054
<211>   4
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Inferred translation product

<400>   10054
Pro Leu Thr Trp
1

<210>   10055
<211>   12
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Inferred translation product

<400>   10055
Phe Ile Leu Lys Pro Ile Ile Glu Met Ser Leu Arg
1          5          10

<210>   10056
<211>   9
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Inferred translation product

<400>   10056
Thr Gly His Leu Val Glu Val Leu His
1          5

<210>   10057
<211>   17
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   Inferred translation product

<400>   10057
Ile Leu Cys Tyr Phe Gln Cys Gln His Asn Gln Ser Val Gln Leu Leu
1          5          10          15

Ser

<210>   10058
<211>   8
<212>   PRT
<213>   Artificial Sequence

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SEQLIST-20480.TXT

<220>  
<223> Inferred translation product

<400> 10058  
Lys Ile Leu Ala Gly Glu Val Gly  
1 5

<210> 10059  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10059  
Tyr Pro Gln His Leu  
1 5

<210> 10060  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10060  
Leu His Asp Ser Pro Leu His Gln Ser Gln Ser Thr His Glu Arg Asp  
1 5 10 15

Glu

<210> 10061  
<211> 4  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10061  
Leu Leu Arg Gly  
1

<210> 10062  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10062  
Leu Gly Asn Ser Phe  
1 5

<210> 10063  
<211> 33  
<212> PRT  
<213> Artificial Sequence

SEQLIST-20480.TXT

<220>  
 <223> Inferred translation product  
 <400> 10063  
 Tyr Lys Met Phe Lys Leu Val Thr Trp Trp Arg Phe Cys Ile Asn Ser  
 1 5 10 15  
 Gly Glu Phe Cys Val Ile Phe Ser Val Asn Ile Thr Ser Arg Tyr Ser  
 20 25 30  
 Tyr

<210> 10064  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10064  
 Val Asn Thr Cys Arg Lys Ser  
 1 5

<210> 10065  
 <211> 54  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10065  
 Val Ser Thr His Ser Ile Ser Ser Cys Met Thr Ala Leu Tyr Ile Lys  
 1 5 10 15  
 Ala Asn Pro Arg Thr Asn Val Thr Asn Ser Phe Phe Ala Gly Asp Lys  
 20 25 30  
 His Ile Arg Val Thr Ile Asp Leu Val Ile His Phe Glu Thr His His  
 35 40 45  
 Arg Asp Glu Ser Thr Val  
 50

<210> 10066  
 <211> 374  
 <212> DNA  
 <213> SARS coronavirus

<400> 10066  
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 tgatacactg aaaggattgt cagacagagt cgtgttcgtc ctttgggagc atggctttga 120  
 gcttacatca atgaagtact ttgtcaagat tggacctgaa agaacgtgtt gtctgtgtga 180  
 caaacgtgca acttgctttt ctacttcac agatacttat gcctgctgga atcattctgt 240  
 gggttttgac tatgtctata acccatttat gattgatgtt cagcagtggg ggctttacgg 300  
 gtaacctttc agagtaacca tgaccaacat tgccaggtagt atggaaatgc acatgtgggc 360  
 tagttgtgat gcta 374

<210> 10067  
 <211> 102

SEQLIST-20480.TXT

<212> PRT  
<213> SARS coronavirus

<400> 10067

Pro Pro Leu Met Tyr Lys Gly Leu Pro Trp Asn Val Val Arg Ile Lys  
1 5 10 15  
Ile Val Gln Met Leu Ser Asp Thr Leu Lys Gly Leu Ser Asp Arg Val  
20 25 30  
Val Phe Val Leu Trp Ala His Gly Phe Glu Leu Thr Ser Met Lys Tyr  
35 40 45  
Phe Val Lys Ile Gly Pro Glu Arg Thr Cys Cys Leu Cys Asp Lys Arg  
50 55 60  
Ala Thr Cys Phe Ser Thr Ser Ser Asp Thr Tyr Ala Cys Trp Asn His  
65 70 75 80  
Ser Val Gly Phe Asp Tyr Val Tyr Asn Pro Phe Met Ile Asp Val Gln  
85 90 95  
Gln Trp Gly Leu Tyr Gly  
100

<210> 10068  
<211> 930  
<212> PRT  
<213> Bovine coronavirus

<400> 10068

Leu Thr Asn Tyr Glu Leu Ser Val Ile Asn Ala Arg Ile Arg Ala Lys  
1 5 10 15  
His Tyr Val Tyr Ile Gly Asp Pro Ala Gln Leu Pro Ala Pro Arg Val  
20 25 30  
Leu Leu Ser Lys Gly Thr Leu Glu Pro Lys Tyr Phe Asn Thr Val Thr  
35 40 45  
Lys Leu Met Cys Cys Leu Gly Pro Asp Ile Phe Leu Gly Thr Cys Tyr  
50 55 60  
Arg Cys Pro Lys Glu Ile Val Asp Thr Val Ser Ala Leu Val Tyr Glu  
65 70 75 80  
Asn Lys Leu Lys Ala Lys Asn Glu Ser Ser Ser Leu Cys Phe Lys Val  
85 90 95  
Tyr Tyr Lys Gly Val Thr Thr His Glu Ser Ser Ser Ala Val Asn Met  
100 105 110  
Gln Gln Ile Tyr Leu Ile Asn Lys Phe Leu Lys Ala Asn Pro Leu Trp  
115 120 125  
His Lys Ala Val Phe Ile Ser Pro Tyr Asn Ser Gln Asn Phe Ala Ala  
130 135 140  
Lys Arg Val Leu Gly Leu Gln Thr Gln Thr Val Asp Ser Ala Gln Gly  
145 150 155 160  
Ser Glu Tyr Asp Tyr Val Ile Tyr Ser Gln Thr Ala Glu Thr Ala His  
165 170 175

SEQLIST-20480.TXT

Ser Val Asn Val Asn Arg Phe Asn Val Ala Ile Thr Arg Ala Lys Lys  
                   180                                  185                  190  
 Gly Ile Leu Cys Val Met Ser Asn Met Gln Leu Phe Glu Ala Leu Gln  
                   195                                  200                  205  
 Phe Thr Thr Leu Thr Leu Asp Lys Val Pro Gln Ala Val Glu Thr Arg  
                   210                                  215                  220  
 Val Gln Cys Ser Thr Asn Leu Phe Lys Asp Cys Ser Lys Ser Tyr Ser  
                   225                                  230                  235                  240  
 Gly Tyr His Pro Ala His Ala Pro Ser Phe Leu Ala Val Asp Asp Lys  
                                   245                                  250                  255  
 Tyr Lys Ala Thr Gly Asp Leu Ala Val Cys Leu Gly Ile Gly Asp Ser  
                                   260                                  265                  270  
 Ala Val Thr Tyr Ser Arg Leu Ile Ser Leu Met Gly Phe Lys Leu Asp  
                                   275                                  280                  285  
 Val Thr Leu Asp Gly Tyr Cys Lys Leu Phe Ile Thr Lys Glu Glu Ala  
                                   290                                  295                  300  
 Val Lys Arg Val Arg Ala Trp Val Gly Phe Asp Ala Glu Gly Ala His  
                                   305                                  310                  315                  320  
 Ala Thr Arg Asp Ser Ile Gly Thr Asn Phe Pro Leu Gln Leu Gly Phe  
                                   325                                  330                  335  
 Ser Thr Gly Ile Asp Phe Val Val Glu Ala Thr Gly Leu Phe Ala Asp  
                                   340                                  345                  350  
 Arg Asp Gly Tyr Ser Phe Lys Lys Ala Val Ala Lys Ala Pro Pro Gly  
                                   355                                  360                  365  
 Glu Gln Phe Lys His Leu Ile Pro Leu Met Thr Arg Gly Gln Arg Trp  
                                   370                                  375                  380  
 Asp Val Val Arg Pro Arg Ile Val Gln Met Phe Ala Asp His Leu Ile  
                                   385                                  390                  395                  400  
 Asp Leu Ser Asp Cys Val Val Leu Val Thr Trp Ala Ala Asn Phe Glu  
                                   405                                  410                  415  
 Leu Thr Cys Leu Arg Tyr Phe Ala Lys Val Gly Arg Glu Ile Ser Cys  
                                   420                                  425                  430  
 Asn Val Cys Thr Lys Arg Ala Thr Ala Tyr Asn Ser Arg Thr Gly Tyr  
                                   435                                  440                  445  
 Tyr Gly Cys Trp Arg His Ser Val Thr Cys Asp Tyr Leu Tyr Asn Pro  
                                   450                                  455                  460  
 Leu Ile Val Asp Ile Gln Gln Trp Gly Tyr Ile Gly Ser Leu Ser Ser  
                                   465                                  470                  475                  480  
 Asn His Asp Leu Tyr Cys Ser Val His Lys Gly Ala His Val Ala Ser  
                                   485                                  490                  495  
 Ser Asp Ala Ile Met Thr Arg Cys Leu Ala Val Tyr Asp Cys Phe Cys  
                                   500                                  505                  510

SEQLIST-20480.TXT

Asn Asn Ile Asn Trp Asn Val Glu Tyr Pro Ile Ile Ser Asn Glu Leu  
 515 520 525  
 Ser Ile Asn Thr Ser Cys Arg Val Leu Gln Arg Val Met Leu Lys Ala  
 530 535 540  
 Ala Met Leu Cys Asn Arg Tyr Thr Leu Cys Tyr Asp Ile Gly Asn Pro  
 545 550 555 560  
 Lys Ala Ile Ala Cys Val Lys Asp Phe Asp Phe Lys Phe Tyr Asp Ala  
 565 570 575  
 Gln Pro Ile Val Lys Ser Val Lys Thr Leu Leu Tyr Ser Phe Glu Ala  
 580 585 590  
 His Lys Asp Ser Phe Lys Asp Gly Leu Cys Met Phe Trp Asn Cys Asn  
 595 600 605  
 Val Asp Lys Tyr Pro Pro Asn Ala Val Val Cys Arg Phe Asp Thr Arg  
 610 615 620  
 Val Leu Asn Asn Leu Asn Leu Pro Gly Cys Asn Gly Gly Ser Leu Tyr  
 625 630 635 640  
 Val Asn Lys His Ala Phe His Thr Lys Pro Phe Ser Arg Ala Ala Phe  
 645 650 655  
 Glu His Leu Lys Pro Met Pro Phe Phe Tyr Tyr Ser Asp Thr Pro Cys  
 660 665 670  
 Val Tyr Met Asp Gly Met Asp Ala Lys Gln Val Asp Tyr Val Pro Leu  
 675 680 685  
 Lys Ser Ala Thr Cys Ile Thr Arg Cys Asn Leu Gly Gly Ala Val Cys  
 690 695 700  
 Leu Lys His Ala Glu Glu Tyr Arg Glu Tyr Leu Glu Ser Tyr Asn Thr  
 705 710 715 720  
 Ala Thr Thr Ala Gly Phe Thr Phe Trp Val Tyr Lys Thr Phe Asp Phe  
 725 730 735  
 Tyr Asn Leu Trp Asn Thr Phe Thr Lys Leu Gln Ser Leu Glu Asn Val  
 740 745 750  
 Val Tyr Asn Leu Val Lys Thr Gly His Tyr Thr Gly Gln Ala Gly Glu  
 755 760 765  
 Met Pro Cys Ala Ile Ile Asn Asp Lys Val Val Ala Lys Ile Asp Lys  
 770 775 780  
 Glu Asp Val Val Ile Phe Ile Asn Asn Thr Thr Tyr Pro Thr Asn Val  
 785 790 795 800  
 Ala Val Glu Leu Phe Ala Lys Arg Ser Ile Arg His His Pro Glu Leu  
 805 810 815  
 Lys Leu Phe Arg Asn Leu Asn Ile Asp Val Cys Trp Lys His Val Ile  
 820 825 830  
 Trp Asp Tyr Ala Arg Glu Ser Ile Phe Cys Ser Asn Thr Tyr Gly Val  
 835 840 845

SEQLIST-20480.TXT

Cys Met Tyr Thr Asp Leu Lys Phe Ile Asp Lys Leu Asn Val Leu Phe  
 850 855 860  
 Asp Gly Arg Asp Asn Gly Ala Leu Glu Ala Phe Lys Arg Ser Asn Asn  
 865 870 875 880  
 Gly Val Tyr Ile Ser Thr Thr Lys Val Lys Ser Leu Ser Met Ile Lys  
 885 890 895  
 Gly Pro Pro Arg Ala Glu Leu Asn Gly Val Val Val Asp Lys Val Gly  
 900 905 910  
 Asp Thr Asp Cys Val Phe Tyr Phe Ala Val Arg Lys Glu Gly Gln Asp  
 915 920 925  
 Val Ile  
 930  
 <210> 10069  
 <211> 911  
 <212> PRT  
 <213> Avian infectious bronchitis virus  
 <400> 10069  
 Leu Thr Asn Tyr Glu Leu Ser Phe Ile Asn Gly Lys Ile Asn Tyr Gln  
 1 5 10 15  
 Tyr Val Val Tyr Val Gly Asp Pro Ala Gln Leu Pro Ala Pro Arg Thr  
 20 25 30  
 Leu Leu Asn Gly Ser Leu Ser Pro Lys Asp Tyr Asn Val Val Thr Asn  
 35 40 45  
 Leu Met Val Cys Val Lys Pro Asp Ile Phe Leu Ala Lys Cys Tyr Arg  
 50 55 60  
 Cys Pro Lys Glu Ile Val Asp Thr Val Ser Thr Leu Val Tyr Asp Gly  
 65 70 75 80  
 Lys Phe Ile Ala Asn Asn Pro Glu Ser Arg Glu Cys Phe Lys Val Ile  
 85 90 95  
 Val Asn Asn Gly Asn Ser Asp Val Gly His Glu Ser Gly Ser Ala Tyr  
 100 105 110  
 Asn Thr Thr Gln Leu Glu Phe Val Lys Asp Phe Val Cys Arg Asn Lys  
 115 120 125  
 Gln Trp Arg Glu Ala Ile Phe Ile Ser Pro Tyr Asn Ala Met Asn Gln  
 130 135 140  
 Arg Ala Tyr Arg Met Leu Gly Leu Asn Val Gln Thr Val Asp Ser Ser  
 145 150 155 160  
 Gln Gly Ser Glu Tyr Asp Tyr Val Ile Phe Cys Val Thr Ala Asp Ser  
 165 170 175  
 Gln His Ala Leu Asn Ile Asn Arg Phe Asn Val Ala Leu Thr Arg Ala  
 180 185 190  
 Lys Arg Gly Ile Leu Val Val Met Arg Gln Arg Asp Glu Leu Tyr Ser  
 195 200 205

SEQLIST-20480.TXT

Ala Leu Lys Phe Thr Glu Leu Asp Ser Glu Thr Ser Leu Gln Gly Thr  
210 215 220  
Gly Leu Phe Lys Ile Cys Asn Lys Glu Phe Ser Gly Val His Pro Ala  
225 230 235 240  
Tyr Ala Val Thr Thr Lys Ala Leu Ala Ala Thr Tyr Lys Val Asn Asp  
245 250 255  
Glu Leu Ala Ala Leu Val Asn Val Glu Ala Gly Ser Glu Ile Thr Tyr  
260 265 270  
Lys His Leu Ile Ser Leu Leu Gly Phe Lys Met Ser Val Asn Val Glu  
275 280 285  
Gly Cys His Asn Met Phe Ile Thr Arg Asp Glu Ala Ile Arg Asn Val  
290 295 300  
Arg Gly Trp Val Gly Phe Asp Val Glu Ala Thr His Ala Cys Gly Thr  
305 310 315 320  
Asn Ile Gly Thr Asn Leu Pro Phe Gln Val Gly Phe Ser Thr Gly Ala  
325 330 335  
Asp Phe Val Val Thr Pro Glu Gly Leu Val Asp Thr Ser Ile Gly Asn  
340 345 350  
Asn Phe Glu Pro Val Asn Ser Lys Ala Pro Pro Gly Glu Gln Phe Asn  
355 360 365  
His Leu Arg Val Leu Phe Lys Ser Ala Lys Pro Trp His Val Ile Arg  
370 375 380  
Pro Arg Ile Val Gln Met Leu Ala Asp Asn Leu Cys Asn Val Ser Asp  
385 390 395 400  
Cys Val Val Phe Val Thr Trp Cys His Gly Leu Glu Leu Thr Thr Leu  
405 410 415  
Arg Tyr Phe Val Lys Ile Gly Lys Glu Gln Val Cys Ser Cys Gly Ser  
420 425 430  
Arg Ala Thr Thr Phe Asn Ser His Thr Gln Ala Tyr Ala Cys Trp Lys  
435 440 445  
His Cys Leu Gly Phe Asp Phe Val Tyr Asn Pro Leu Leu Val Asp Ile  
450 455 460  
Gln Gln Trp Gly Tyr Ser Gly Asn Leu Gln Phe Asn His Asp Leu His  
465 470 475 480  
Cys Asn Val His Gly His Ala His Val Ala Ser Val Asp Ala Ile Met  
485 490 495  
Thr Arg Cys Leu Ala Ile Asn Asn Ala Phe Cys Gln Asp Val Asn Trp  
500 505 510  
Asp Leu Thr Tyr Pro His Ile Ala Asn Glu Asp Glu Val Asn Ser Ser  
515 520 525  
Cys Arg Tyr Leu Gln Arg Met Tyr Leu Asn Ala Cys Val Asp Ala Leu  
530 535 540

SEQLIST-20480.TXT

Lys Val Asn Val Val Tyr Asp Ile Gly Asn Pro Lys Gly Ile Lys Cys  
 545 550 555 560  
 Val Arg Arg Gly Asp Val Asn Phe Arg Phe Tyr Asp Lys Asn Pro Ile  
 565 570 575  
 Val Arg Asn Val Lys Gln Phe Glu Tyr Asp Tyr Asn Gln His Lys Asp  
 580 585 590  
 Lys Phe Ala Asp Gly Leu Cys Met Phe Trp Asn Cys Asn Val Asp Cys  
 595 600 605  
 Tyr Pro Asp Asn Ser Leu Val Cys Arg Tyr Asp Thr Arg Asn Leu Ser  
 610 615 620  
 Val Phe Asn Leu Pro Gly Cys Asn Gly Gly Ser Leu Tyr Val Asn Lys  
 625 630 635 640  
 His Ala Phe Tyr Thr Pro Lys Phe Asp Arg Ile Ser Phe Arg Asn Leu  
 645 650 655  
 Lys Ala Met Pro Phe Phe Phe Tyr Asp Ser Ser Pro Cys Glu Thr Ile  
 660 665 670  
 Gln Val Asp Gly Val Ala Gln Asp Leu Val Ser Leu Ala Thr Lys Asp  
 675 680 685  
 Cys Ile Thr Lys Cys Asn Ile Gly Gly Ala Val Cys Lys Lys His Ala  
 690 695 700  
 Gln Met Tyr Ala Glu Phe Val Thr Ser Tyr Asn Ala Ala Val Thr Ala  
 705 710 715 720  
 Gly Phe Thr Phe Trp Val Thr Asn Lys Leu Asn Pro Tyr Asn Leu Trp  
 725 730 735  
 Lys Ser Phe Ser Ala Leu Gln Ser Ile Asp Asn Ile Ala Tyr Asn Met  
 740 745 750  
 Tyr Lys Gly Gly His Tyr Asp Ala Ile Ala Gly Glu Met Pro Thr Val  
 755 760 765  
 Ile Thr Gly Asp Lys Val Phe Val Ile Asp Gln Gly Val Glu Lys Ala  
 770 775 780  
 Val Phe Val Asn Gln Thr Thr Leu Pro Thr Ser Val Ala Phe Glu Leu  
 785 790 795 800  
 Tyr Ala Lys Arg Asn Ile Arg Thr Leu Pro Asn Asn Arg Ile Leu Lys  
 805 810 815  
 Gly Leu Gly Val Asp Val Thr Asn Gly Phe Val Ile Trp Asp Tyr Ala  
 820 825 830  
 Asn Gln Thr Pro Leu Tyr Arg Asn Thr Val Lys Val Cys Ala Tyr Thr  
 835 840 845  
 Asp Ile Glu Pro Asn Gly Leu Val Val Leu Tyr Asp Asp Arg Tyr Gly  
 850 855 860  
 Asp Tyr Gln Ser Phe Leu Ala Ala Asp Asn Ala Val Leu Val Ser Thr  
 865 870 875 880



SEQLIST-20480.TXT

Gln Cys Tyr Lys Arg Tyr Ser Tyr Val Glu Ile Pro Ser Asn Leu Leu  
885 890 895

Val Gln Asn Gly Met Pro Leu Lys Asp Gly Ala Asn Leu Tyr Val  
900 905 910

<210> 10070  
<211> 927  
<212> PRT  
<213> Murine hepatitis virus

<400> 10070  
Leu Thr Asn Tyr Glu Leu Ser Val Ile Asn Ser Arg Val Arg Ala Lys  
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His Tyr Val Tyr Ile Gly Asp Pro Ala Gln Leu Pro Ala Pro Arg Val  
20 25 30

Leu Leu Asn Lys Gly Thr Leu Glu Pro Arg Tyr Phe Asn Ser Val Thr  
35 40 45

Lys Leu Met Cys Cys Leu Gly Pro Asp Ile Phe Leu Gly Thr Cys Tyr  
50 55 60

Arg Cys Pro Lys Glu Ile Val Asp Thr Val Ser Ala Leu Val Tyr Asn  
65 70 75 80

Asn Lys Leu Lys Ala Lys Asn Asp Asn Ser Ser Met Cys Phe Lys Val  
85 90 95

Tyr Tyr Lys Gly Gln Thr Thr His Glu Ser Ser Ser Ala Val Asn Met  
100 105 110

Gln Gln Ile His Leu Ile Ser Lys Phe Leu Lys Ala Asn Pro Ser Trp  
115 120 125

Ser Asn Ala Val Phe Ile Ser Pro Tyr Asn Ser Gln Asn Tyr Val Ala  
130 135 140

Lys Arg Val Leu Gly Leu Gln Thr Gln Thr Val Asp Ser Ala Gln Gly  
145 150 155 160

Ser Glu Tyr Asp Phe Val Ile Tyr Ser Gln Thr Ala Glu Thr Ala His  
165 170 175

Ser Val Asn Val Asn Arg Phe Asn Val Ala Ile Thr Arg Ala Lys Lys  
180 185 190

Gly Ile Leu Cys Val Met Ser Ser Met Gln Leu Phe Glu Ser Leu Asn  
195 200 205

Phe Thr Thr Leu Thr Leu Asp Lys Ile Asn Asn Pro Arg Leu Gln Cys  
210 215 220

Thr Thr Asn Leu Phe Lys Asp Cys Ser Arg Ser Tyr Val Gly Tyr His  
225 230 235 240

Pro Ala His Ala Pro Ser Phe Leu Ala Val Asp Asp Lys Tyr Lys Val  
245 250 255

Gly Gly Asp Leu Ala Val Cys Leu Asn Val Ala Asp Ser Ala Val Thr  
260 265 270

SEQLIST-20480.TXT

Tyr Ser Arg Leu Ile Ser Leu Met Gly Phe Lys Leu Asp Leu Thr Leu  
 275 280  
 Asp Gly Tyr Cys Lys Leu Phe Ile Thr Arg Asp Glu Ala Ile Lys Arg  
 290 295 300  
 Val Arg Ala Trp Val Gly Phe Asp Ala Glu Gly Ala His Ala Ile Arg  
 305 310 315 320  
 Asp Ser Ile Gly Thr Asn Phe Pro Leu Gln Leu Gly Phe Ser Thr Gly  
 325 330 335  
 Ile Asp Phe Val Val Glu Ala Thr Gly Met Phe Ala Glu Arg Asp Gly  
 340 345 350  
 Tyr Val Phe Lys Lys Ala Ala Ala Arg Ala Pro Pro Gly Glu Gln Phe  
 355 360 365  
 Lys His Leu Ile Pro Leu Met Ser Arg Gly Gln Lys Trp Asp Val Val  
 370 375 380  
 Arg Ile Arg Ile Val Gln Met Leu Ser Asp His Leu Val Asp Leu Ala  
 385 390 395 400  
 Asp Ser Val Val Leu Val Thr Trp Ala Ala Ser Phe Glu Leu Thr Cys  
 405 410 415  
 Leu Arg Tyr Phe Ala Lys Val Gly Arg Glu Val Val Cys Ser Val Cys  
 420 425 430  
 Thr Lys Arg Ala Thr Cys Phe Asn Ser Arg Thr Gly Tyr Tyr Gly Cys  
 435 440 445  
 Trp Arg His Ser Tyr Ser Cys Asp Tyr Leu Tyr Asn Pro Leu Ile Val  
 450 455 460  
 Asp Ile Gln Gln Trp Gly Tyr Thr Gly Ser Leu Thr Ser Asn His Asp  
 465 470 475 480  
 Pro Ile Cys Ser Val His Lys Gly Ala His Val Ala Ser Ser Asp Ala  
 485 490 495  
 Ile Met Thr Arg Cys Leu Ala Val His Asp Cys Phe Cys Lys Ser Val  
 500 505 510  
 Asn Trp Asn Leu Glu Tyr Pro Ile Ile Ser Asn Glu Val Ser Val Asn  
 515 520 525  
 Thr Ser Cys Arg Leu Leu Gln Arg Val Met Phe Arg Ala Ala Met Leu  
 530 535 540  
 Cys Asn Arg Tyr Asp Val Cys Tyr Asp Ile Gly Asn Pro Lys Gly Leu  
 545 550 555 560  
 Ala Cys Val Lys Gly Tyr Asp Phe Lys Phe Tyr Asp Ala Ser Pro Val  
 565 570 575  
 Val Lys Ser Val Lys Gln Phe Val Tyr Lys Tyr Glu Ala His Lys Asp  
 580 585 590  
 Gln Phe Leu Asp Gly Leu Cys Met Phe Trp Asn Cys Asn Val Asp Lys  
 595 600 605

SEQLIST-20480.TXT

Tyr Pro Ala Asn Ala Val Val Cys Arg Phe Asp Thr Arg Val Leu Asn  
 610 615 620  
 Lys Leu Asn Leu Pro Gly Cys Asn Gly Gly Ser Leu Tyr Val Asn Lys  
 625 630 635 640  
 His Ala Phe His Thr Ser Pro Phe Thr Arg Ala Ala Phe Glu Asn Leu  
 645 650 655  
 Lys Pro Met Pro Phe Phe Tyr Tyr Ser Asp Thr Pro Cys Val Tyr Met  
 660 665 670  
 Glu Gly Met Glu Ser Lys Gln Val Asp Tyr Val Pro Leu Arg Ser Ala  
 675 680 685  
 Thr Cys Ile Thr Arg Cys Asn Leu Gly Gly Ala Val Cys Leu Lys His  
 690 695 700  
 Ala Glu Glu Tyr Arg Glu Tyr Leu Glu Ser Tyr Asn Thr Ala Thr Thr  
 705 710 715 720  
 Ala Gly Phe Thr Phe Trp Val Tyr Lys Thr Phe Asp Phe Tyr Asn Leu  
 725 730 735  
 Trp Asn Thr Phe Thr Arg Leu Gln Ser Leu Glu Asn Val Val Tyr Asn  
 740 745 750  
 Leu Val Asn Ala Gly His Phe Asp Gly Arg Ala Gly Glu Leu Pro Cys  
 755 760 765  
 Ala Val Ile Gly Glu Lys Val Ile Ala Lys Ile Gln Asn Glu Asp Val  
 770 775 780  
 Val Val Phe Lys Asn Asn Thr Pro Phe Pro Thr Asn Val Ala Val Glu  
 785 790 795 800  
 Leu Phe Ala Lys Arg Ser Ile Arg Pro His Pro Glu Leu Lys Leu Phe  
 805 810 815  
 Arg Asn Leu Asn Ile Asp Val Cys Trp Ser His Val Leu Trp Asp Tyr  
 820 825 830  
 Ala Lys Asp Ser Val Phe Cys Ser Ser Thr Tyr Lys Val Cys Lys Tyr  
 835 840 845  
 Thr Asp Leu Gln Cys Ile Glu Ser Leu Asn Val Leu Phe Asp Gly Arg  
 850 855 860  
 Asp Asn Gly Ala Leu Glu Ala Phe Lys Lys Cys Arg Asn Gly Val Tyr  
 865 870 875 880  
 Ile Asn Thr Thr Lys Ile Lys Ser Leu Ser Met Ile Lys Gly Pro Gln  
 885 890 895  
 Arg Ala Asp Leu Asn Gly Val Val Val Glu Lys Val Gly Asp Ser Asp  
 900 905 910  
 Val Glu Phe Trp Phe Ala Val Arg Lys Asp Gly Asp Asp Val Ile  
 915 920 925  
 <210> 10071  
 <211> 936

SEQLIST-20480.TXT

<212> PRT  
<213> Artificial Sequence

<220>  
<223> Consensus sequence

<220>  
<221> misc\_feature  
<222> 1..936  
<223> Xaa is any amino acid

<400> 10071

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Leu Thr Asn Tyr Glu Leu Ser Val Ile Asn Ala Arg Ile Xaa Ala Lys
1      5      10      15
His Tyr Val Tyr Ile Gly Asp Pro Ala Gln Leu Pro Ala Pro Arg Val
20     25     30
Leu Leu Asn Lys Gly Thr Leu Glu Pro Lys Tyr Phe Asn Ser Val Thr
35     40     45
Lys Leu Met Cys Cys Leu Gly Pro Asp Ile Phe Leu Gly Thr Cys Tyr
50     55     60
Arg Cys Pro Lys Glu Ile Val Asp Thr Val Ser Ala Leu Val Tyr Asp
65     70     75     80
Asn Lys Leu Lys Ala Lys Asn Asp Xaa Ser Ser Leu Cys Phe Lys Val
85     90     95
Tyr Tyr Lys Gly Xaa Xaa Xaa Xaa Thr Thr His Glu Ser Ser Ser Ala
100    105    110
Val Asn Met Gln Gln Ile His Leu Ile Xaa Lys Phe Leu Lys Ala Asn
115    120    125
Pro Xaa Trp Xaa Xaa Ala Val Phe Ile Ser Pro Tyr Asn Ser Gln Asn
130    135    140
Phe Xaa Ala Lys Arg Val Leu Gly Leu Gln Thr Gln Thr Val Asp Ser
145    150    155    160
Ala Gln Gly Ser Glu Tyr Asp Tyr Val Ile Tyr Ser Gln Thr Ala Glu
165    170    175
Thr Ala His Ser Val Asn Val Asn Arg Phe Asn Val Ala Ile Thr Arg
180    185    190
Ala Lys Lys Gly Ile Leu Cys Val Met Ser Asn Met Gln Leu Phe Glu
195    200    205
Ser Leu Asn Phe Thr Thr Leu Thr Leu Asp Lys Ile Xaa Xaa Xaa Xaa
210    215    220
Xaa Xaa Arg Leu Gln Cys Ser Thr Asn Leu Phe Lys Asp Cys Ser Lys
225    230    235    240
Ser Tyr Ser Gly Tyr His Pro Ala His Ala Pro Ser Phe Leu Ala Val
245    250    255
Asp Asp Lys Tyr Lys Val Xaa Gly Asp Leu Ala Val Cys Leu Asn Val
260    265    270

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SEQLIST-20480.TXT

Ala Asp Xaa Ser Ala Val Thr Tyr Ser Arg Leu Ile Ser Leu Met Gly  
275 280 285

Phe Lys Leu Asp Val Thr Leu Asp Gly Tyr Cys Asn Leu Phe Ile Thr  
290 295 300

Arg Asp Glu Ala Ile Lys Arg Val Arg Ala Trp Val Gly Phe Asp Val  
305 310 315 320

Glu Gly Ala His Ala Thr Arg Asp Ser Ile Gly Thr Asn Leu Pro Leu  
325 330 335

Gln Leu Gly Phe Ser Thr Gly Ile Asp Phe Val Val Glu Pro Thr Gly  
340 345 350

Leu Val Asp Thr Arg Asp Gly Tyr Xaa Phe Lys Lys Val Asn Ala Lys  
355 360 365

Ala Pro Pro Gly Glu Gln Phe Lys His Leu Ile Pro Leu Met Ser Arg  
370 375 380

Gly Gln Pro Trp Asp Val Val Arg Pro Arg Ile Val Gln Met Leu Ala  
385 390 395 400

Asp His Leu Xaa Asp Leu Ser Asp Cys Val Val Leu Val Thr Trp Ala  
405 410 415

His Gly Phe Glu Leu Thr Cys Leu Arg Tyr Phe Val Lys Ile Gly Arg  
420 425 430

Glu Ile Ser Cys Cys Val Cys Thr Lys Arg Ala Thr Cys Phe Asn Ser  
435 440 445

Arg Thr Gly Tyr Tyr Ala Cys Trp Arg His Ser Val Gly Phe Asp Tyr  
450 455 460

Leu Tyr Asn Pro Leu Ile Val Asp Ile Gln Gln Trp Gly Tyr Ser Gly  
465 470 475 480

Ser Leu Ser Ser Asn His Asp Leu His Cys Ser Val His Lys Gly Ala  
485 490 495

His Val Ala Ser Ser Asp Ala Ile Met Thr Arg Cys Leu Ala Val His  
500 505 510

Asp Cys Phe Cys Asn Xaa Val Asn Trp Asn Leu Glu Tyr Pro Ile Ile  
515 520 525

Ser Asn Glu Leu Ser Val Asn Thr Ser Cys Arg Leu Leu Gln Arg Val  
530 535 540

Met Leu Lys Ala Ala Met Leu Cys Asn Arg Tyr Xaa Val Cys Tyr Asp  
545 550 555 560

Ile Gly Asn Pro Lys Gly Ile Ala Cys Val Lys Xaa Xaa Xaa Phe Asp  
565 570 575

Phe Lys Phe Tyr Asp Ala Asn Pro Ile Val Lys Ser Val Lys Gln Phe  
580 585 590

Leu Tyr Xaa Tyr Glu Ala His Lys Asp Xaa Phe Xaa Asp Gly Leu Cys  
595 600 605

SEQLIST-20480.TXT

Met Phe Trp Asn Cys Asn Val Asp Lys Tyr Pro Xaa Asn Ala Val Val  
610 615 620

Cys Arg Phe Asp Thr Arg Val Leu Asn Xaa Leu Asn Leu Pro Gly Cys  
625 630 635 640

Asn Gly Gly Ser Leu Tyr Val Asn Lys His Ala Phe His Thr Xaa Pro  
645 650 655

Phe Ser Arg Ala Ala Phe Glu Asn Leu Lys Pro Met Pro Phe Phe Tyr  
660 665 670

Tyr Ser Asp Thr Pro Cys Val Tyr Met Asp Gly Met Asp Ala Lys Gln  
675 680 685

Val Asp Tyr Val Pro Leu Lys Ser Ala Thr Cys Ile Thr Arg Cys Asn  
690 695 700

Leu Gly Gly Ala Val Cys Leu Lys His Ala Glu Glu Tyr Arg Glu Tyr  
705 710 715 720

Leu Glu Ser Tyr Asn Thr Ala Thr Thr Ala Gly Phe Thr Phe Trp Val  
725 730 735

Tyr Lys Thr Phe Asp Phe Tyr Asn Leu Trp Asn Thr Phe Thr Lys Leu  
740 745 750

Gln Ser Leu Glu Asn Val Val Tyr Asn Leu Val Lys Ala Gly His Tyr  
755 760 765

Asp Gly Xaa Ala Gly Glu Met Pro Cys Ala Ile Ile Gly Asp Lys Val  
770 775 780

Ile Ala Lys Ile Gln Xaa Glu Asp Val Val Val Phe Ile Asn Asn Thr  
785 790 795 800

Thr Phe Pro Thr Asn Val Ala Val Glu Leu Phe Ala Lys Arg Ser Ile  
805 810 815

Arg Xaa His Pro Glu Leu Lys Leu Phe Arg Asn Leu Asn Ile Asp Val  
820 825 830

Cys Trp Xaa His Val Ile Trp Asp Tyr Ala Lys Asp Ser Ile Phe Cys  
835 840 845

Ser Asn Thr Tyr Lys Val Cys Xaa Tyr Thr Asp Leu Xaa Xaa Ile Asp  
850 855 860

Xaa Leu Asn Val Leu Phe Asp Gly Arg Asp Asn Gly Ala Leu Glu Ala  
865 870 875 880

Phe Lys Lys Ala Xaa Asn Gly Val Tyr Ile Ser Thr Thr Lys Ile Lys  
885 890 895

Ser Leu Ser Met Ile Lys Gly Pro Xaa Arg Ala Asp Leu Asn Gly Val  
900 905 910

Val Val Asp Lys Val Gly Asp Ser Asp Xaa Xaa Phe Trp Phe Ala Val  
915 920 925

Arg Lys Asp Gly Asn Asp Val Ile  
930 935

SEQLIST-20480.TXT

<210> 10072  
 <211> 229  
 <212> PRT  
 <213> SARS coronavirus

<220>  
 <221> misc\_feature  
 <222> 206  
 <223> Xaa is any amino acid

<400> 10072  
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 20 25 30  
 Ala Ile Arg His Val Arg Ala Trp Ile Gly Phe Asp Val Glu Gly Cys  
 35 40 45  
 His Ala Thr Arg Asp Ala Val Gly Thr Asn Leu Pro Leu Gln Leu Gly  
 50 55 60  
 Phe Ser Thr Gly Val Asn Leu Val Ala Val Pro Thr Gly Tyr Val Asp  
 65 70 75 80  
 Thr Glu Asn Asn Thr Lys Phe Thr Arg Val Asn Ala Gln Thr Ser Thr  
 85 90 95  
 Ser Glu Gln Phe Lys His Leu Ile Pro Leu Met Tyr Lys Gly Leu Pro  
 100 105 110  
 Trp Asn Val Val Arg Ile Lys Ile Val Gln Met Leu Ser Asp Thr Leu  
 115 120 125  
 Lys Gly Leu Ser Asp Arg Val Val Phe Val Leu Trp Ala His Gly Phe  
 130 135 140  
 Glu Leu Thr Ser Met Lys Tyr Phe Val Lys Ile Gly Pro Glu Arg Thr  
 145 150 155 160  
 Cys Cys Leu Cys Asp Lys Arg Ala Thr Cys Phe Ser Thr Ser Ser Asp  
 165 170 175  
 Thr Tyr Ala Cys Trp Asn His Ser Val Gly Phe Asp Tyr Val Tyr Asn  
 180 185 190  
 Pro Phe Met Ile Asp Val Gln Gln Trp Gly Leu Tyr Gly Xaa Pro Phe  
 195 200 205  
 Arg Val Thr Met Thr Asn Ile Ala Arg Tyr Met Glu Met His Met Trp  
 210 215 220  
 Ala Ser Cys Asp Ala  
 225

<210> 10073  
 <211> 522  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Hybrid AIBV/SARS coronavirus sequence

SEQLIST-20480.TXT

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<400> 10073
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Pro Ala Tyr Ala Val Thr Thr Lys Ala Leu Ala Ala Thr Tyr Lys Val
20 25 30
Asn Asp Glu Leu Ala Ala Leu Val Asn Val Glu Ala Gly Lys Gly His
35 40 45
Asp Leu Arg Arg Leu Ile Ser Met Met Gly Phe Lys Met Asn Tyr Gln
50 55 60
Val Asn Gly Tyr Pro Asn Met Phe Ile Thr Arg Glu Glu Ala Ile Arg
65 70 75 80
His Val Arg Ala Trp Ile Gly Phe Asp Val Glu Gly Cys His Ala Thr
85 90 95
Arg Asp Ala Val Gly Thr Asn Leu Pro Leu Gln Leu Gly Phe Ser Thr
100 105 110
Gly Val Asn Leu Val Ala Val Pro Thr Gly Tyr Val Asp Thr Glu Asn
115 120 125
Asn Thr Lys Phe Thr Arg Val Asn Ala Gln Thr Ser Thr Ser Glu Gln
130 135 140
Phe Lys His Leu Ile Pro Leu Met Tyr Lys Gly Leu Pro Trp Asn Val
145 150 155 160
Val Arg Ile Lys Ile Val Gln Met Leu Ser Asp Thr Leu Lys Gly Leu
165 170 175
Ser Asp Arg Val Val Phe Val Leu Trp Ala His Gly Phe Glu Leu Thr
180 185 190
Ser Met Lys Tyr Phe Val Lys Ile Gly Pro Glu Arg Thr Cys Cys Leu
195 200 205
Cys Asp Lys Arg Ala Thr Cys Phe Ser Thr Ser Ser Asp Thr Tyr Ala
210 215 220
Cys Trp Asn His Ser Val Gly Phe Asp Tyr Val Tyr Asn Pro Phe Met
225 230 235 240
Ile Asp Val Gln Gln Trp Gly Leu Tyr Gly Asn Leu Gln Phe Asn His
245 250 255
Asp Leu His Cys Asn Val His Gly His Ala His Val Ala Ser Val Asp
260 265 270
Ala Ile Met Thr Arg Cys Leu Ala Ile Asn Asn Ala Phe Cys Gln Asp
275 280 285
Val Asn Trp Asp Leu Thr Tyr Pro His Ile Ala Asn Glu Asp Glu Val
290 295 300
Asn Ser Ser Cys Arg Tyr Leu Gln Arg Met Tyr Leu Asn Ala Cys Val
305 310 315 320
Asp Ala Leu Lys Val Asn Val Val Tyr Asp Ile Gly Asn Pro Lys Gly

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SEQLIST-20480.TXT

325

330

335

Ile Lys Cys Val Arg Arg Gly Asp Val Asn Phe Arg Phe Tyr Asp Lys  
 340 345 350  
 Asn Pro Ile Val Arg Asn Val Lys Gln Phe Glu Tyr Asp Tyr Asn Gln  
 355 360 365  
 His Lys Asp Lys Phe Ala Asp Gly Leu Cys Met Phe Trp Asn Cys Asn  
 370 375 380  
 Val Asp Cys Tyr Pro Asp Asn Ser Leu Val Cys Arg Tyr Asp Thr Arg  
 385 390 395 400  
 Asn Leu Ser Val Phe Asn Leu Pro Gly Cys Asn Gly Gly Ser Leu Tyr  
 405 410 415  
 Val Asn Lys His Ala Phe Tyr Thr Pro Lys Phe Asp Arg Ile Ser Phe  
 420 425 430  
 Arg Asn Leu Lys Ala Met Pro Phe Phe Phe Tyr Asp Ser Ser Pro Cys  
 435 440 445  
 Glu Thr Ile Gln Val Asp Gly Val Ala Gln Asp Leu Val Ser Leu Ala  
 450 455 460  
 Thr Lys Asp Cys Ile Thr Lys Cys Asn Ile Gly Gly Ala Val Cys Lys  
 465 470 475 480  
 Lys His Ala Gln Met Tyr Ala Glu Phe Val Thr Ser Tyr Asn Ala Ala  
 485 490 495  
 Val Thr Ala Gly Phe Thr Phe Trp Val Thr Asn Lys Leu Asn Pro Tyr  
 500 505 510  
 Asn Leu Trp Lys Ser Phe Ser Ala Leu Gln  
 515 520

<210> 10074  
 <211> 521  
 <212> PRT  
 <213> Hybrid BCov/SARS coronavirus sequence

<400> 10074  
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 20 25 30  
 Ala Thr Gly Asp Leu Ala Val Cys Leu Gly Ile Gly Asp Lys Gly His  
 35 40 45  
 Asp Leu Arg Arg Leu Ile Ser Met Met Gly Phe Lys Met Asn Tyr Gln  
 50 55 60  
 Val Asn Gly Tyr Pro Asn Met Phe Ile Thr Arg Glu Glu Ala Ile Arg  
 65 70 75 80  
 His Val Arg Ala Trp Ile Gly Phe Asp Val Glu Gly Cys His Ala Thr  
 85 90 95  
 Arg Asp Ala Val Gly Thr Asn Leu Pro Leu Gln Leu Gly Phe Ser Thr

SEQLIST-20480.TXT

100	105	110
Gly Val Asn Leu Val Ala Val Pro Thr Gly Tyr Val Asp Thr Glu Asn		
115	120	125
Asn Thr Lys Phe Thr Arg Val Asn Ala Gln Thr Ser Thr Ser Glu Gln		
130	135	140
Phe Lys His Leu Ile Pro Leu Met Tyr Lys Gly Leu Pro Trp Asn Val		
145	150	155
Val Arg Ile Lys Ile Val Gln Met Leu Ser Asp Thr Leu Lys Gly Leu		
	165	170
Ser Asp Arg Val Val Phe Val Leu Trp Ala His Gly Phe Glu Leu Thr		
	180	185
Ser Met Lys Tyr Phe Val Lys Ile Gly Pro Glu Arg Thr Cys Cys Leu		
	195	200
Cys Asp Lys Arg Ala Thr Cys Phe Ser Thr Ser Ser Asp Thr Tyr Ala		
	210	215
Cys Trp Asn His Ser Val Gly Phe Asp Tyr Val Tyr Asn Pro Phe Met		
	225	230
Ile Asp Val Gln Gln Trp Gly Leu Tyr Gly Ser Leu Ser Ser Asn His		
	245	250
Asp Leu Tyr Cys Ser Val His Lys Gly Ala His Val Ala Ser Ser Asp		
	260	265
Ala Ile Met Thr Arg Cys Leu Ala Val Tyr Asp Cys Phe Cys Asn Asn		
	275	280
Ile Asn Trp Asn Val Glu Tyr Pro Ile Ile Ser Asn Glu Leu Ser Ile		
	290	295
Asn Thr Ser Cys Arg Val Leu Gln Arg Val Met Leu Lys Ala Ala Met		
	305	310
Leu Cys Asn Arg Tyr Thr Leu Cys Tyr Asp Ile Gly Asn Pro Lys Ala		
	325	330
Ile Ala Cys Val Lys Asp Phe Asp Phe Lys Phe Tyr Asp Ala Gln Pro		
	340	345
Ile Val Lys Ser Val Lys Thr Leu Leu Tyr Ser Phe Glu Ala His Lys		
	355	360
Asp Ser Phe Lys Asp Gly Leu Cys Met Phe Trp Asn Cys Asn Val Asp		
	370	375
Lys Tyr Pro Pro Asn Ala Val Val Cys Arg Phe Asp Thr Arg Val Leu		
	385	390
Asn Asn Leu Asn Leu Pro Gly Cys Asn Gly Gly Ser Leu Tyr Val Asn		
	405	410
Lys His Ala Phe His Thr Lys Pro Phe Ser Arg Ala Ala Phe Glu His		
	420	425
Leu Lys Pro Met Pro Phe Phe Tyr Tyr Ser Asp Thr Pro Cys Val Tyr		
	430	

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435 440 445  
Met Asp Gly Met Asp Ala Lys Gln Val Asp Tyr Val Pro Leu Lys Ser  
450 455 460  
Ala Thr Cys Ile Thr Arg Cys Asn Leu Gly Gly Ala Val Cys Leu Lys  
465 470 475 480  
His Ala Glu Glu Tyr Arg Glu Tyr Leu Glu Ser Tyr Asn Thr Ala Thr  
485 490 495  
Thr Ala Gly Phe Thr Phe Trp Val Tyr Lys Thr Phe Asp Phe Tyr Asn  
500 505 510  
Leu Trp Asn Thr Phe Thr Lys Leu Gln  
515 520  
<210> 10075  
<211> 521  
<212> PRT  
<213> Hybrid MHV/SARS coronavirus sequence  
<400> 10075  
Cys Thr Thr Asn Leu Phe Lys Asp Cys Ser Arg Ser Tyr Val Gly Tyr  
1 5 10 15  
His Pro Ala His Ala Pro Ser Phe Leu Ala Val Asp Asp Lys Tyr Lys  
20 25 30  
Val Gly Gly Asp Leu Ala Val Cys Leu Asn Val Ala Asp Lys Gly His  
35 40 45  
Asp Leu Arg Arg Leu Ile Ser Met Met Gly Phe Lys Met Asn Tyr Gln  
50 55 60  
Val Asn Gly Tyr Pro Asn Met Phe Ile Thr Arg Glu Glu Ala Ile Arg  
65 70 75 80  
His Val Arg Ala Trp Ile Gly Phe Asp Val Glu Gly Cys His Ala Thr  
85 90 95  
Arg Asp Ala Val Gly Thr Asn Leu Pro Leu Gln Leu Gly Phe Ser Thr  
100 105 110  
Gly Val Asn Leu Val Ala Val Pro Thr Gly Tyr Val Asp Thr Glu Asn  
115 120 125  
Asn Thr Lys Phe Thr Arg Val Asn Ala Gln Thr Ser Thr Ser Glu Gln  
130 135 140  
Phe Lys His Leu Ile Pro Leu Met Tyr Lys Gly Leu Pro Trp Asn Val  
145 150 155 160  
Val Arg Ile Lys Ile Val Gln Met Leu Ser Asp Thr Leu Lys Gly Leu  
165 170 175  
Ser Asp Arg Val Val Phe Val Leu Trp Ala His Gly Phe Glu Leu Thr  
180 185 190  
Ser Met Lys Tyr Phe Val Lys Ile Gly Pro Glu Arg Thr Cys Cys Leu  
195 200 205  
Cys Asp Lys Arg Ala Thr Cys Phe Ser Thr Ser Ser Asp Thr Tyr Ala

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210                               215                               220
Cys Trp Asn His Ser Val Gly Phe Asp Tyr Val Tyr Asn Pro Phe Met
225                               230                               235                               240
Ile Asp Val Gln Gln Trp Gly Leu Tyr Gly Ser Leu Thr Ser Asn His
245                               250                               255
Asp Pro Ile Cys Ser Val His Lys Gly Ala His Val Ala Ser Ser Asp
260                               265                               270
Ala Ile Met Thr Arg Cys Leu Ala Val His Asp Cys Phe Cys Lys Ser
275                               280                               285
Val Asn Trp Asn Leu Glu Tyr Pro Ile Ile Ser Asn Glu Val Ser Val
290                               295                               300
Asn Thr Ser Cys Arg Leu Leu Gln Arg Val Met Phe Arg Ala Ala Met
305                               310                               315
Leu Cys Asn Arg Tyr Asp Val Cys Tyr Asp Ile Gly Asn Pro Lys Gly
325                               330                               335
Leu Ala Cys Val Lys Gly Tyr Asp Phe Lys Phe Tyr Asp Ala Ser Pro
340                               345                               350
Val Val Lys Ser Val Lys Gln Phe Val Tyr Lys Tyr Glu Ala His Lys
355                               360                               365
Asp Gln Phe Leu Asp Gly Leu Cys Met Phe Trp Asn Cys Asn Val Asp
370                               375                               380
Lys Tyr Pro Ala Asn Ala Val Val Cys Arg Phe Asp Thr Arg Val Leu
385                               390                               395
Asn Lys Leu Asn Leu Pro Gly Cys Asn Gly Gly Ser Leu Tyr Val Asn
405                               410                               415
Lys His Ala Phe His Thr Ser Pro Phe Thr Arg Ala Ala Phe Glu Asn
420                               425                               430
Leu Lys Pro Met Pro Phe Phe Tyr Tyr Ser Asp Thr Pro Cys Val Tyr
435                               440                               445
Met Glu Gly Met Glu Ser Lys Gln Val Asp Tyr Val Pro Leu Arg Ser
450                               455                               460
Ala Thr Cys Ile Thr Arg Cys Asn Leu Gly Gly Ala Val Cys Leu Lys
465                               470                               475
His Ala Glu Glu Tyr Arg Glu Tyr Leu Glu Ser Tyr Asn Thr Ala Thr
485                               490                               495
Thr Ala Gly Phe Thr Phe Trp Val Tyr Lys Thr Phe Asp Phe Tyr Asn
500                               505                               510
Leu Trp Asn Thr Phe Thr Arg Leu Gln
515                               520

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<210> 10076  
 <211> 520  
 <212> PRT  
 <213> Hybrid consensus/SARS coronavirus sequence

SEQLIST-20480.TXT

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<400> 10076
Cys Ser Thr Asn Leu Phe Lys Asp Cys Ser Lys Ser Tyr Ser Gly Tyr
1 5 10 15
His Pro Ala His Ala Pro Ser Phe Leu Ala Val Asp Asp Lys Tyr Lys
20 25 30
Val Gly Gly Asp Leu Ala Val Cys Leu Asn Val Ala Asp Lys Gly His
35 40 45
Asp Leu Arg Arg Leu Ile Ser Met Met Gly Phe Lys Met Asn Tyr Gln
50 55 60
Val Asn Gly Tyr Pro Asn Met Phe Ile Thr Arg Glu Glu Ala Ile Arg
65 70 75 80
His Val Arg Ala Trp Ile Gly Phe Asp Val Glu Gly Cys His Ala Thr
85 90 95
Arg Asp Ala Val Gly Thr Asn Leu Pro Leu Gln Leu Gly Phe Ser Thr
100 105 110
Gly Val Asn Leu Val Ala Val Pro Thr Gly Tyr Val Asp Thr Glu Asn
115 120 125
Asn Thr Lys Phe Thr Arg Val Asn Ala Gln Thr Ser Thr Ser Glu Gln
130 135 140
Phe Lys His Leu Ile Pro Leu Met Tyr Lys Gly Leu Pro Trp Asn Val
145 150 155 160
Val Arg Ile Lys Ile Val Gln Met Leu Ser Asp Thr Leu Lys Gly Leu
165 170 175
Ser Asp Arg Val Val Phe Val Leu Trp Ala His Gly Phe Glu Leu Thr
180 185 190
Ser Met Lys Tyr Phe Val Lys Ile Gly Pro Glu Arg Thr Cys Cys Leu
195 200 205
Cys Asp Lys Arg Ala Thr Cys Phe Ser Thr Ser Ser Asp Thr Tyr Ala
210 215 220
Cys Trp Asn His Ser Val Gly Phe Asp Tyr Val Tyr Asn Pro Phe Met
225 230 235 240
Ile Asp Val Gln Gln Trp Gly Leu Tyr Gly Ser Leu Ser Ser Asn His
245 250 255
Asp Leu His Cys Ser Val His Lys Gly Ala His Val Ala Ser Ser Asp
260 265 270
Ala Ile Met Thr Arg Cys Leu Ala Val His Asp Cys Phe Cys Asn Ser
275 280 285
Val Asn Trp Asn Leu Glu Tyr Pro Ile Ile Ser Asn Glu Leu Ser Val
290 295 300
Asn Thr Ser Cys Arg Leu Leu Gln Arg Val Met Leu Lys Ala Ala Met
305 310 315 320
Leu Cys Asn Arg Tyr Thr Val Cys Tyr Asp Ile Gly Asn Pro Lys Gly

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SEQLIST-20480.TXT

325

330

335

Ile Ala Cys Val<sub>340</sub> Lys Asp Phe Asp Phe<sub>345</sub> Lys Phe Tyr Asp Ala<sub>350</sub> Asn Pro  
 Ile Val Lys<sub>355</sub> Ser Val Lys Gln Phe<sub>360</sub> Leu Tyr Ser Tyr Glu<sub>365</sub> Ala His Lys  
 Asp Ser<sub>370</sub> Phe Lys Asp Gly<sub>375</sub> Leu Cys Met Phe Trp Asn<sub>380</sub> Cys Asn Val Asp  
 Lys Tyr Pro Ala Asn Ala<sub>390</sub> Val Val Cys Arg Phe<sub>395</sub> Asp Thr Arg Val Leu<sub>400</sub>  
 Asn Leu Asn Leu Pro<sub>405</sub> Gly Cys Asn Gly<sub>410</sub> Gly Ser Leu Tyr Val Asn<sub>415</sub> Lys  
 His Ala Phe His<sub>420</sub> Thr Lys Pro Phe Ser<sub>425</sub> Arg Ala Ala Phe Glu<sub>430</sub> Asn Leu  
 Lys Pro Met<sub>435</sub> Pro Phe Phe Tyr Tyr<sub>440</sub> Ser Asp Thr Pro Cys<sub>445</sub> Val Tyr Met  
 Asp Gly<sub>450</sub> Met Asp Ala Lys Gln<sub>455</sub> Val Asp Tyr Val Pro<sub>460</sub> Leu Lys Ser Ala  
 Thr Cys Ile Thr Arg Cys<sub>470</sub> Asn Leu Gly Gly Ala<sub>475</sub> Val Cys Leu Lys His<sub>480</sub>  
 Ala Glu Glu Tyr Arg<sub>485</sub> Glu Tyr Leu Glu Ser<sub>490</sub> Tyr Asn Thr Ala Thr Thr<sub>495</sub>  
 Ala Gly Phe Thr<sub>500</sub> Phe Trp Val Tyr Lys<sub>505</sub> Thr Phe Asp Phe Tyr<sub>510</sub> Asn Leu  
 Trp Asn Thr<sub>515</sub> Phe Thr Lys Leu Gln<sub>520</sub>

<210> 10077  
 <211> 524  
 <212> PRT  
 <213> Consensus hybrid sequence

<220>  
 <221> misc\_feature  
 <222> 1..524  
 <223> Xaa is any amino acid

<400> 10077  
 Cys Ser Thr Asn<sub>5</sub> Leu Phe Lys Asp Cys<sub>10</sub> Ser Lys Ser Tyr Ser Gly Tyr<sub>15</sub>  
 His Pro Ala His<sub>20</sub> Ala Pro Ser Phe<sub>25</sub> Leu Ala Val Asp Asp Lys Tyr Lys<sub>30</sub>  
 Val Gly Gly<sub>35</sub> Asp Leu Ala Val Cys<sub>40</sub> Leu Asn Val Ala<sub>45</sub> Asp Xaa Lys Gly  
 His Asp<sub>50</sub> Leu Arg Arg Leu Ile<sub>55</sub> Ser Met Met Gly Phe<sub>60</sub> Lys Met Asn Tyr  
 Gln Val Asn Gly Tyr Pro<sub>70</sub> Asn Met Phe Ile Thr<sub>75</sub> Arg Glu Glu Ala Ile<sub>80</sub>  
 65 70 75 80

SEQLIST-20480.TXT

Arg His Val Arg Ala Trp Ile Gly Phe Asp Val Glu Gly Cys His Ala  
 85 90 95  
 Thr Arg Asp Ala Val Gly Thr Asn Leu Pro Leu Gln Leu Gly Phe Ser  
 100 105 110  
 Thr Gly Val Asn Leu Val Ala Val Pro Thr Gly Tyr Val Asp Thr Glu  
 115 120 125  
 Asn Asn Thr Lys Phe Thr Arg Val Asn Ala Gln Thr Ser Thr Ser Glu  
 130 135 140  
 Gln Phe Lys His Leu Ile Pro Leu Met Tyr Lys Gly Leu Pro Trp Asn  
 145 150 155 160  
 Val Val Arg Ile Lys Ile Val Gln Met Leu Ser Asp Thr Leu Lys Gly  
 165 170 175  
 Leu Ser Asp Arg Val Val Phe Val Leu Trp Ala His Gly Phe Glu Leu  
 180 185 190  
 Thr Ser Met Lys Tyr Phe Val Lys Ile Gly Pro Glu Arg Thr Cys Cys  
 195 200 205  
 Leu Cys Asp Lys Arg Ala Thr Cys Phe Ser Thr Ser Ser Asp Thr Tyr  
 210 215 220  
 Ala Cys Trp Asn His Ser Val Gly Phe Asp Tyr Val Tyr Asn Pro Phe  
 225 230 235 240  
 Met Ile Asp Val Gln Gln Trp Gly Leu Tyr Gly Ser Leu Ser Ser Asn  
 245 250 255  
 His Asp Leu His Cys Ser Val His Lys Gly Ala His Val Ala Ser Ser  
 260 265 270  
 Asp Ala Ile Met Thr Arg Cys Leu Ala Val His Asp Cys Phe Cys Asn  
 275 280 285  
 Ser Val Asn Trp Asn Leu Glu Tyr Pro Ile Ile Ser Asn Glu Leu Ser  
 290 295 300  
 Val Asn Thr Ser Cys Arg Leu Leu Gln Arg Val Met Leu Lys Ala Ala  
 305 310 315 320  
 Met Leu Cys Asn Arg Tyr Thr Val Cys Tyr Asp Ile Gly Asn Pro Lys  
 325 330 335  
 Gly Ile Ala Cys Val Lys Xaa Xaa Asp Phe Asp Phe Lys Phe Tyr Asp  
 340 345 350  
 Ala Asn Pro Ile Val Lys Ser Val Lys Gln Phe Leu Tyr Ser Tyr Glu  
 355 360 365  
 Ala His Lys Asp Ser Phe Lys Asp Gly Leu Cys Met Phe Trp Asn Cys  
 370 375 380  
 Asn Val Asp Lys Tyr Pro Ala Asn Ala Val Val Cys Arg Phe Asp Thr  
 385 390 395 400  
 Arg Val Leu Asn Xaa Leu Asn Leu Pro Gly Cys Asn Gly Gly Ser Leu  
 405 410 415

SEQLIST-20480.TXT

Tyr Val Asn Lys His Ala Phe His Thr Lys Pro Phe Ser Arg Ala Ala  
420 425 430  
Phe Glu Asn Leu Lys Pro Met Pro Phe Phe Tyr Tyr Ser Asp Thr Pro  
435 440 445  
Cys Val Tyr Met Asp Gly Met Asp Ala Lys Gln Val Asp Tyr Val Pro  
450 455 460  
Leu Lys Ser Ala Thr Cys Ile Thr Arg Cys Asn Leu Gly Gly Ala Val  
465 470 475 480  
Cys Leu Lys His Ala Glu Glu Tyr Arg Glu Tyr Leu Glu Ser Tyr Asn  
485 490 495  
Thr Ala Thr Thr Ala Gly Phe Thr Phe Trp Val Tyr Lys Thr Phe Asp  
500 505 510  
Phe Tyr Asn Leu Trp Asn Thr Phe Thr Lys Leu Gln  
515 520

<210> 10078  
<211> 54  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10078  
Val Ser Thr His Ser Ile Ser Ser Cys Met Thr Ala Leu Tyr Ile Lys  
1 5 10 15  
Ala Asn Pro Arg Thr Asn Val Thr Asn Ser Phe Phe Ala Gly Asp Lys  
20 25 30  
His Ile Arg Val Thr Ile Asp Leu Val Ile His Phe Glu Thr His His  
35 40 45  
Arg Asp Glu Ser Thr Val  
50

<210> 10079  
<211> 6  
<212> PRT  
<213> SARS coronavirus

<400> 10079  
Pro Lys Asp Met Thr Tyr  
1 5

<210> 10080  
<211> 336  
<212> DNA  
<213> SARS coronavirus

<400> 10080  
tagtcaaaac ccacagaatg attccagcag gcataagtat ctgatgaagt agaaaagcaa 60  
gttgacggtt tgtcacacag acaacacggt ctttcagggtc caatcttgac aaagtacttc 120  
attgatgtaa gtcxaaagcc atgcgcccac aggacgaaca cgactctgtc tgacaatcct 180  
ttcagtgtat cactgagcat ttgtactatc ttaatacgca ctacattcca gggcaagcct 240  
ttatacatga gtggtataag atgtttaaac tgctcactgg tggagggttg tgcattaact 300



ctggtgaatt ttgtgttatt ttcagtgtca acataa

<210> 10081  
 <211> 88  
 <212> PRT  
 <213> SARS coronavirus

<400> 10081  
 Met Ser His Arg Gln His Val Leu Ser Gly Pro Ile Leu Thr Lys Tyr  
 1 5 10 15  
 Phe Ile Asp Val Ser Ser Lys Pro Cys Ala Gln Arg Thr Asn Thr Thr  
 20 25 30  
 Leu Ser Asp Asn Pro Phe Ser Val Ser Leu Ser Ile Cys Thr Ile Leu  
 35 40 45  
 Ile Arg Thr Thr Phe Gln Gly Lys Pro Leu Tyr Met Ser Gly Ile Arg  
 50 55 60  
 Cys Leu Asn Cys Ser Leu Val Glu Val Cys Ala Leu Thr Leu Val Asn  
 65 70 75 80  
 Phe Val Leu Phe Ser Val Ser Thr  
 85

<210> 10082  
 <211> 76  
 <212> PRT  
 <213> SARS coronavirus

<400> 10082  
 Met Thr Lys Tyr Phe Ile Asp Val Ser Ser Lys Pro Cys Ala Gln Arg  
 1 5 10 15  
 Thr Asn Thr Thr Leu Ser Asp Asn Pro Phe Ser Val Ser Leu Ser Ile  
 20 25 30  
 Cys Thr Ile Leu Ile Arg Thr Thr Phe Gln Gly Lys Pro Leu Tyr Met  
 35 40 45  
 Ser Gly Ile Arg Cys Leu Asn Cys Ser Leu Val Glu Val Cys Ala Leu  
 50 55 60  
 Thr Leu Val Asn Phe Val Leu Phe Ser Val Ser Thr  
 65 70 75

<210> 10083  
 <211> 29  
 <212> PRT  
 <213> SARS coronavirus

<400> 10083  
 Met Ser Gly Ile Arg Cys Leu Asn Cys Ser Leu Val Glu Val Cys Ala  
 1 5 10 15  
 Leu Thr Leu Val Asn Phe Val Leu Phe Ser Val Ser Thr  
 20 25

<210> 10084  
 <211> 1463  
 <212> DNA  
 <213> SARS coronavirus

SEQLIST-20480.TXT

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<400> 10084
cctaggcata cccaaaggac atgacctacc gtagactcat ctctatgatg ggttttcaaaa 60
tgaattacca agtcaatggg taccctaata tgtttatcac ccgcgaagaa gctattcgtc 120
acgttcgtgc gtggattggc tttgatgtag agggctgtca tgcaactaga gatgctgtgg 180
gtactaacct acctctccag ctaggatttt ctacagggtg taacttagta gctgtaccga 240
ctggttatgt tgacactgaa aataacacag aattcaccag agttaatgca aaacctccac 300
cagggtgacca gtttaaacaat cttataccac tcatgtataa aggcttgccc tggaatgtag 360
tgcgtattaa gatagtacaa atgctcagtg atacactgaa aggattgtca gacagagtcg 420
tgttcgtcct ttgggcgcat ggctttgagc ttacatcaat gaagtacttt gtcaagattg 480
gacctgaaag aacgtgttgt ctgtgtgaca aacgtgcaac ttgcttttct acttcatcag 540
atacttatgc ctgctggaat cattctgtgg gttttgacta tgtctataac ccatttatga 600
ttgatgttaa gcagtggggc tttacgggta accttcagag taaccatgac caacattgcc 660
aggtacatgg aaatgcacat gtggctagtt gtgatgctat catgactaga tgttttagcag 720
tccatgagtg ctttgtttaag cgcgttgatt ggtctgttga ataccctatt ataggagatg 780
aactgagggt taattctgct tgcagaaaag tacaacacat ggttgtgaag tctgcattgc 840
ttgctgataa gtttccagtt cttcatgaca taggaaatcc aaaggctatc aagtgtgtgc 900
ctcaggctga agtagaatgg aagttctacg atgctcagcc atgtagtgac aaagcttaca 960
aaatagagga actcttctat tcttatgcta tacatcacga taaattcact gatgggtgtt 1020
gtttgttttg gaattgtaac gttgatcgtt acccagccaa tgcaatttg ttaggtttg 1080
acacaagagt cttgtcaaac ttgaacttac caggctgtga tgggtgtagt ttgtatgtga 1140
ataagcatgc attccacact ccagctttcg ataaaagtgc atttactaat ttaaagcaat 1200
tgcctttctt ttactattct gatagtcctt gtgagtctca tggcaaacaa gtagtgctcg 1260
atattgatta tgttccactc aaatctgcta cgtgtattac acgatgcaat ttaggtggtg 1320
ctgtttgcag acaccatgca aatgagtacc gacagtactt ggatgcatat aatatgatga 1380
tttctgctgg atttagccta tggatttaca aacaatttga tacttataac ctgtggaata 1440
catttaccag gttacagagt tta 1463

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<210> 10085
<211> 7
<212> PRT
<213> Artificial Sequence

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<220>
<223> Inferred translation product

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<400> 10085
Pro Arg His Thr Gln Arg Thr
1 5

```

```

<210> 10086
<211> 7
<212> PRT
<213> Artificial Sequence

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```

<220>
<223> Inferred translation product

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```

<400> 10086
Pro Thr Val Asp Ser Ser Leu
1 5

```

```

<210> 10087
<211> 4
<212> PRT
<213> Artificial Sequence

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```

<220>
<223> Inferred translation product

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```

<400> 10087
Trp Val Ser Lys
1

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SEQLIST-20480.TXT

<210> 10088  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10088  
 Ile Thr Lys Ser Met Val Thr Leu Ile Cys Leu Ser Pro Ala Lys Lys  
 1 5 10 15  
 Leu Phe Val Thr Phe Val Arg Gly Leu Ala Leu Met  
 20 25

<210> 10089  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10089  
 Arg Ala Val Met Gln Leu Glu Met Leu Trp Val Leu Thr Tyr Leu Ser  
 1 5 10 15  
 Ser

<210> 10090  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10090  
 Asp Phe Leu Gln Val Leu Thr  
 1 5

<210> 10091  
 <211> 42  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10091  
 Leu Tyr Arg Leu Val Met Leu Thr Leu Lys Ile Thr Gln Asn Ser Pro  
 1 5 10 15  
 Glu Leu Met Gln Asn Leu His Gln Val Thr Ser Leu Asn Ile Leu Tyr  
 20 25 30  
 His Ser Cys Ile Lys Ala Cys Pro Gly Met  
 35 40

<210> 10092  
 <211> 4

<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10092  
Cys Val Leu Arg  
1

<210> 10093  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10093  
Tyr Lys Cys Ser Val Ile His  
1 5

<210> 10094  
<211> 20  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10094  
Lys Asp Cys Gln Thr Glu Ser Cys Ser Ser Phe Gly Arg Met Ala Leu  
1 5 10 15

Ser Leu His Gln  
20

<210> 10095  
<211> 45  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10095  
Ser Thr Leu Ser Arg Leu Asp Leu Lys Glu Arg Val Val Cys Val Thr  
1 5 10 15

Asn Val Gln Leu Ala Phe Leu Leu His Gln Ile Leu Met Pro Ala Gly  
20 25 30

Ile Ile Leu Trp Val Leu Thr Met Ser Ile Thr His Leu  
35 40 45

<210> 10096  
<211> 34  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

SEQLIST-20480.TXT

<400> 10096  
 Leu Met Phe Ser Ser Gly Ala Leu Arg Val Thr Phe Arg Val Thr Met  
 1 5 10 15  
 Thr Asn Ile Ala Arg Tyr Met Glu Met His Met Trp Leu Val Val Met  
 20 25 30  
 Leu Ser

<210> 10097  
 <211> 18  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10097  
 Gln Ser Met Ser Ala Leu Leu Ser Ala Leu Ile Gly Leu Leu Asn Thr  
 1 5 10 15  
 Leu Leu

<210> 10098  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10098  
 Gly Leu Ile Leu Leu Ala Glu Lys Tyr Asn Thr Trp Leu  
 1 5 10

<210> 10099  
 <211> 14  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10099  
 Ser Leu His Cys Leu Leu Ile Ser Phe Gln Phe Phe Met Thr  
 1 5 10

<210> 10100  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10100  
 Glu Ile Gln Arg Leu Ser Ser Val Cys Leu Arg Leu Lys  
 1 5 10

<210> 10101  
 <211> 16

SEQLIST-20480.TXT

<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10101  
Asn Gly Ser Ser Thr Met Leu Ser His Val Val Thr Lys Leu Thr Lys  
1 5 10 15

<210> 10102  
<211> 45  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10102  
Arg Asn Ser Ser Ile Leu Met Leu Tyr Ile Thr Ile Asn Ser Leu Met  
1 5 10 15

Val Phe Val Cys Phe Gly Ile Val Thr Leu Ile Val Thr Gln Pro Met  
20 25 30

Gln Leu Cys Val Gly Leu Thr Gln Glu Ser Cys Gln Thr  
35 40 45

<210> 10103  
<211> 11  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10103  
Thr Tyr Gln Ala Val Met Val Val Val Cys Met  
1 5 10

<210> 10104  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10104  
Ile Ser Met His Ser Thr Leu Gln Leu Ser Ile Lys Val His Leu Leu  
1 5 10 15

Ile

<210> 10105  
<211> 19  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

SEQLIST-20480.TXT

<400> 10105  
 Ser Asn Cys Leu Ser Phe Thr Ile Leu Ile Val Leu Val Ser Leu Met  
 1 5 10 15

Ala Asn Lys

<210> 10106  
 <211> 19  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10106  
 Cys Arg Ile Leu Ile Met Phe His Ser Asn Leu Leu Arg Val Leu His  
 1 5 10 15

Asp Ala Ile

<210> 10107  
 <211> 20  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10107  
 Val Val Leu Phe Ala Asp Thr Met Gln Met Ser Thr Asp Ser Thr Trp  
 1 5 10 15

Met His Ile Ile  
 20

<210> 10108  
 <211> 27  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10108  
 Phe Leu Leu Asp Leu Ala Tyr Gly Phe Thr Asn Asn Leu Ile Leu Ile  
 1 5 10 15

Thr Cys Gly Ile His Leu Pro Gly Tyr Arg Val  
 20 25

<210> 10109  
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<220>  
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<400> 10109  
 Leu Gly Ile Pro Lys Gly His Asp Leu Pro

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1          5          10
<210>      10110
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<400>      10110
Thr His Leu Tyr Asp Gly Phe Gln Asn Glu Leu Pro Ser Gln Trp Leu
1          5          10          15

Pro

<210>      10111
<211>      18
<212>      PRT
<213>      Artificial Sequence

<220>
<223>      Inferred translation product

<400>      10111
Tyr Val Tyr His Pro Arg Arg Ser Tyr Ser Ser Arg Ser Cys Val Asp
1          5          10          15

Trp Leu

<210>      10112
<211>      7
<212>      PRT
<213>      Artificial Sequence

<220>
<223>      Inferred translation product

<400>      10112
Cys Arg Gly Leu Ser Cys Asn
1          5

<210>      10113
<211>      5
<212>      PRT
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<220>
<223>      Inferred translation product

<400>      10113
Arg Cys Cys Gly Tyr
1          5

<210>      10114
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<213>      Artificial Sequence

<220>
<223>      Inferred translation product

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Pro Thr Ser Pro Ala Arg Ile Phe Tyr Arg Cys  
1 5 10

<210> 10115  
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<400> 10115  
Leu Ser Ser Cys Thr Asp Trp Leu Cys  
1 5

<210> 10116  
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<400> 10116  
His Arg Ile His Gln Ser  
1 5

<210> 10117  
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<400> 10117  
Cys Lys Thr Ser Thr Arg  
1 5

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<400> 10118  
Thr Ser Tyr Thr Thr His Val  
1 5

<210> 10119  
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<400> 10119  
Arg Leu Ala Leu Glu Cys Ser Ala Tyr

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1          5
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<212>      PRT
<213>      Artificial Sequence

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<400>      10120
Asp Ser Thr Asn Ala Gln
1          5

<210>      10121
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<213>      Artificial Sequence

<220>
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<400>      10121
Tyr Thr Glu Arg Ile Val Arg Gln Ser Arg Val Arg Pro Leu Gly Ala
1          5          10          15

Trp Leu

<210>      10122
<211>      12
<212>      PRT
<213>      Artificial Sequence

<220>
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<400>      10122
Ala Tyr Ile Asn Glu Val Leu Cys Gln Asp Trp Thr
1          5          10

<210>      10123
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<212>      PRT
<213>      Artificial Sequence

<220>
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<400>      10123
Lys Asn Val Leu Ser Val
1          5

<210>      10124
<211>      22
<212>      PRT
<213>      Artificial Sequence

<220>
<223>      Inferred translation product

<400>      10124
Gln Thr Cys Asn Leu Leu Phe Tyr Phe Ile Arg Tyr Leu Cys Leu Leu

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1 5 15

Glu Ser Phe Cys Gly Phe  
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<210> 10125  
<211> 4  
<212> PRT  
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<400> 10125  
Pro Ile Tyr Asp  
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<210> 10126  
<211> 8  
<212> PRT  
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<400> 10126  
Cys Ser Ala Val Gly Leu Tyr Gly  
1 5

<210> 10127  
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<400> 10127  
Pro Thr Leu Pro Gly Thr Trp Lys Cys Thr Cys Gly  
1 5 10

<210> 10128  
<211> 4  
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<400> 10128  
Cys Tyr His Asp  
1

<210> 10129  
<211> 5  
<212> PRT  
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<220>  
<223> Inferred translation product

<400> 10129  
Met Phe Ser Ser Pro

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1          5
<210>      10130
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<212>      PRT
<213>      Artificial Sequence

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<400>      10130
Ile Pro Tyr Tyr Arg Arg
1          5

<210>      10131
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<213>      Artificial Sequence

<220>
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<400>      10131
Phe Cys Leu Gln Lys Ser Thr Thr His Gly Cys Glu Val Cys Ile Ala
1          5          10          15
Cys

<210>      10132
<211>      5
<212>      PRT
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<220>
<223>      Inferred translation product

<400>      10132
Val Ser Ser Ser Ser
1          5

<210>      10133
<211>      13
<212>      PRT
<213>      Artificial Sequence

<220>
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<400>      10133
His Arg Lys Ser Lys Gly Tyr Gln Val Cys Ala Ser Gly
1          5          10

<210>      10134
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<213>      Artificial Sequence

<220>
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<400>      10134
Ser Arg Met Glu Val Leu Arg Cys Ser Ala Met

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 Gln Ser Leu Gln Asn Arg Gly Thr Leu Leu Phe Leu Cys Tyr Thr Ser  
 1 5 10 15

Arg

<210> 10136  
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 <400> 10136  
 Trp Cys Leu Phe Val Leu Glu Leu  
 1 5

<210> 10137  
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 <400> 10137  
 Ser Leu Pro Ser Gln Cys Asn Cys Val  
 1 5

<210> 10138  
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 <400> 10138  
 His Lys Ser Leu Val Lys Leu Glu Leu Thr Arg Leu  
 1 5 10

<210> 10139  
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 <400> 10139  
 Phe Val Cys Glu

1

<210> 10140  
 <211> 9  
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<220>  
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<400> 10140  
 Ala Cys Ile Pro His Ser Ser Phe Arg  
 1 5

<210> 10141  
 <211> 4  
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<220>  
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<400> 10141  
 Lys Cys Ile Tyr  
 1

<210> 10142  
 <211> 10  
 <212> PRT  
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<220>  
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<400> 10142  
 Phe Lys Ala Ile Ala Phe Leu Leu Leu Phe  
 1 5 10

<210> 10143  
 <211> 10  
 <212> PRT  
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<220>  
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<400> 10143  
 Val Ser Trp Gln Thr Ser Ser Val Gly Tyr  
 1 5 10

<210> 10144  
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<220>  
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<400> 10144  
 Leu Cys Ser Thr Gln Ile Cys Tyr Val Tyr Tyr Thr Met Gln Phe Arg  
 1 5 10 15

Trp Cys Cys Leu Gln Thr Pro Cys Lys

20

<210> 10145  
<211> 8  
<212> PRT  
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<400> 10145  
Val Pro Thr Val Leu Gly Cys Ile  
1 5

<210> 10146  
<211> 7  
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<400> 10146  
Tyr Asp Asp Phe Cys Trp Ile  
1 5

<210> 10147  
<211> 7  
<212> PRT  
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<220>  
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<400> 10147  
Pro Met Asp Leu Gln Thr Ile  
1 5

<210> 10148  
<211> 11  
<212> PRT  
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<220>  
<223> Inferred translation product

<400> 10148  
Pro Val Glu Tyr Ile Tyr Gln Val Thr Glu Phe  
1 5 10

<210> 10149  
<211> 486  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10149  
Ala Tyr Pro Lys Asp Met Thr Tyr Arg Arg Leu Ile Ser Met Met Gly  
1 5 10 15

Phe Lys Met Asn Tyr Gln Val Asn Gly Tyr Pro Asn Met Phe Ile Thr

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20	25	30
Arg Glu Glu Ala Ile Arg His Val Arg Ala Trp Ile Gly Phe Asp Val	35	40
Glu Gly Cys His Ala Thr Arg Asp Ala Val Gly Thr Asn Leu Pro Leu	50	55
Gln Leu Gly Phe Ser Thr Gly Val Asn Leu Val Ala Val Pro Thr Gly	65	70
Tyr Val Asp Thr Glu Asn Asn Thr Glu Phe Thr Arg Val Asn Ala Lys	85	90
Pro Pro Pro Gly Asp Gln Phe Lys His Leu Ile Pro Leu Met Tyr Lys	100	105
Gly Leu Pro Trp Asn Val Val Arg Ile Lys Ile Val Gln Met Leu Ser	115	120
Asp Thr Leu Lys Gly Leu Ser Asp Arg Val Val Phe Val Leu Trp Ala	130	135
His Gly Phe Glu Leu Thr Ser Met Lys Tyr Phe Val Lys Ile Gly Pro	145	150
Glu Arg Thr Cys Cys Leu Cys Asp Lys Arg Ala Thr Cys Phe Ser Thr	165	170
Ser Ser Asp Thr Tyr Ala Cys Trp Asn His Ser Val Gly Phe Asp Tyr	180	185
Val Tyr Asn Pro Phe Met Ile Asp Val Gln Gln Trp Gly Phe Thr Gly	195	200
Asn Leu Gln Ser Asn His Asp Gln His Cys Gln Val His Gly Asn Ala	210	215
His Val Ala Ser Cys Asp Ala Ile Met Thr Arg Cys Leu Ala Val His	225	230
Glu Cys Phe Val Lys Arg Val Asp Trp Ser Val Glu Tyr Pro Ile Ile	245	250
Gly Asp Glu Leu Arg Val Asn Ser Ala Cys Arg Lys Val Gln His Met	260	265
Val Val Lys Ser Ala Leu Leu Ala Asp Lys Phe Pro Val Leu His Asp	275	280
Ile Gly Asn Pro Lys Ala Ile Lys Cys Val Pro Gln Ala Glu Val Glu	290	295
Trp Lys Phe Tyr Asp Ala Gln Pro Cys Ser Asp Lys Ala Tyr Lys Ile	305	310
Glu Glu Leu Phe Tyr Ser Tyr Ala Ile His His Asp Lys Phe Thr Asp	325	330
Gly Val Cys Leu Phe Trp Asn Cys Asn Val Asp Arg Tyr Pro Ala Asn	340	345
Ala Ile Val Cys Arg Phe Asp Thr Arg Val Leu Ser Asn Leu Asn Leu		



355 360 365  
Pro Gly Cys Asp Gly Gly Ser Leu Tyr Val Asn Lys His Ala Phe His  
370 375 380  
Thr Pro Ala Phe Asp Lys Ser Ala Phe Thr Asn Leu Lys Gln Leu Pro  
385 390 395 400  
Phe Phe Tyr Tyr Ser Asp Ser Pro Cys Glu Ser His Gly Lys Gln Val  
405 410 415  
Val Ser Asp Ile Asp Tyr Val Pro Leu Lys Ser Ala Thr Cys Ile Thr  
420 425 430  
Arg Cys Asn Leu Gly Gly Ala Val Cys Arg His His Ala Asn Glu Tyr  
435 440 445  
Arg Gln Tyr Leu Asp Ala Tyr Asn Met Met Ile Ser Ala Gly Phe Ser  
450 455 460  
Leu Trp Ile Tyr Lys Gln Phe Asp Thr Tyr Asn Leu Trp Asn Thr Phe  
465 470 475 480  
Thr Arg Leu Gln Ser Leu  
485

<210> 10150  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
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<400> 10150  
Pro Gly Lys Cys Ile Pro Gln Val Ile Ser Ile Lys Leu Phe Val Asn  
1 5 10 15

Pro

<210> 10151  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10151  
Ala Lys Ser Ser Arg Asn His His Ile Ile Cys Ile Gln Val Leu Ser  
1 5 10 15

Val Leu Ile Cys Met Val Ser Ala Asn Ser Thr Thr  
20 25

<210> 10152  
<211> 39  
<212> PRT  
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<220>  
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SEQLIST-20480.TXT

<400> 10152  
 Ile Ala Ser Cys Asn Thr Arg Ser Arg Phe Glu Trp Asn Ile Ile Asn  
 1 5 10 15  
 Ile Arg His Tyr Leu Phe Ala Met Arg Leu Thr Arg Thr Ile Arg Ile  
 20 25 30  
 Val Lys Glu Arg Gln Leu Leu  
 35

<210> 10153  
 <211> 27  
 <212> PRT  
 <213> Artificial Sequence

<220>  
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<400> 10153  
 Ile Ser Lys Cys Thr Phe Ile Glu Ser Trp Ser Val Glu Cys Met Leu  
 1 5 10 15  
 Ile His Ile Gln Thr Thr Thr Ile Thr Ala Trp  
 20 25

<210> 10154  
 <211> 126  
 <212> PRT  
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<220>  
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<400> 10154  
 Gln Asp Ser Cys Val Lys Pro Thr His Asn Cys Ile Gly Trp Val Thr  
 1 5 10 15  
 Ile Asn Val Thr Ile Pro Lys Gln Thr Asn Thr Ile Ser Glu Phe Ile  
 20 25 30  
 Val Met Tyr Ser Ile Arg Ile Glu Glu Phe Leu Tyr Phe Val Ser Phe  
 35 40 45  
 Val Thr Thr Trp Leu Ser Ile Val Glu Leu Pro Phe Tyr Phe Ser Leu  
 50 55 60  
 Arg His Thr Leu Asp Ser Leu Trp Ile Ser Tyr Val Met Lys Asn Trp  
 65 70 75 80  
 Lys Leu Ile Ser Lys Gln Cys Arg Leu His Asn His Val Leu Tyr Phe  
 85 90 95  
 Ser Ala Ser Arg Ile Asn Pro Gln Phe Ile Ser Tyr Asn Arg Val Phe  
 100 105 110  
 Asn Arg Pro Ile Asn Ala Leu Asn Lys Ala Leu Met Asp Cys  
 115 120 125

<210> 10155  
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<220>  
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 Thr Ser Ser His Asp Ser Ile Thr Thr Ser His Met Cys Ile Ser Met  
 1 5 10 15  
 Tyr Leu Ala Met Leu Val Met Val Thr Leu Lys Val Thr Arg Lys Ala  
 20 25 30  
 Pro Leu Leu Asn Ile Asn His Lys Trp Val Ile Asp Ile Val Lys Thr  
 35 40 45  
 His Arg Met Ile Pro Ala Gly Ile Ser Ile  
 50 55

<210> 10156  
 <211> 25  
 <212> PRT  
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<220>  
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 <400> 10156  
 Ser Arg Lys Ala Ser Cys Thr Phe Val Thr Gln Thr Thr Arg Ser Phe  
 1 5 10 15  
 Arg Ser Asn Leu Asp Lys Val Leu His  
 20 25

<210> 10157  
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 <212> PRT  
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 <400> 10157  
 Cys Lys Leu Lys Ala Met Arg Pro Lys Asp Glu His Asp Ser Val  
 1 5 10 15

<210> 10158  
 <211> 60  
 <212> PRT  
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<220>  
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 <400> 10158  
 Gln Ser Phe Gln Cys Ile Thr Glu His Leu Tyr Tyr Leu Asn Thr His  
 1 5 10 15  
 Tyr Ile Pro Gly Gln Ala Phe Ile His Glu Trp Tyr Lys Met Phe Lys  
 20 25 30  
 Leu Val Thr Trp Trp Arg Phe Cys Ile Asn Ser Gly Glu Phe Cys Val  
 35 40 45  
 Ile Phe Ser Val Asn Ile Thr Ser Arg Tyr Ser Tyr

50

55

<210> 10159  
<211> 7  
<212> PRT  
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<220>  
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<400> 10159  
Val Asn Thr Cys Arg Lys Ser  
1 5

<210> 10160  
<211> 62  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10160  
Val Ser Thr His Ser Ile Ser Ser Cys Met Thr Ala Leu Tyr Ile Lys  
1 5 10 15  
Ala Asn Pro Arg Thr Asn Val Thr Asn Ser Phe Phe Ala Gly Asp Lys  
20 25 30  
His Ile Arg Val Thr Ile Asp Leu Val Ile His Phe Glu Thr His His  
35 40 45  
Arg Asp Glu Ser Thr Val Gly His Val Leu Trp Val Cys Leu  
50 55 60

<210> 10161  
<211> 12  
<212> PRT  
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<220>  
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<400> 10161  
Lys Leu Cys Asn Leu Val Asn Val Phe His Arg Leu  
1 5 10

<210> 10162  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10162  
Val Ser Asn Cys Leu  
1 5

<210> 10163  
<211> 45  
<212> PRT  
<213> Artificial Sequence

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<220>  
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 <400> 10163  
 Ile His Arg Leu Asn Pro Ala Glu Ile Ile Ile Leu Tyr Ala Ser Lys  
 1 5 10 15  
 Tyr Cys Arg Tyr Ser Phe Ala Trp Cys Leu Gln Thr Ala Pro Pro Lys  
 20 25 30  
 Leu His Arg Val Ile His Val Ala Asp Leu Ser Gly Thr  
 35 40 45

<210> 10164  
 <211> 9  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10164  
 Ser Ile Ser Asp Thr Thr Cys Leu Pro  
 1 5

<210> 10165  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

<220>  
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<400> 10165  
 Asp Ser Gln Gly Leu Ser Glu  
 1 5

<210> 10166  
 <211> 68  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10166  
 Lys Lys Gly Asn Cys Phe Lys Leu Val Asn Ala Leu Leu Ser Lys Ala  
 1 5 10 15  
 Gly Val Trp Asn Ala Cys Leu Phe Thr Tyr Lys Leu Pro Pro Ser Gln  
 20 25 30  
 Pro Gly Lys Phe Lys Phe Asp Lys Thr Leu Val Ser Asn Leu His Thr  
 35 40 45  
 Ile Ala Leu Arg Ser Thr Leu Gln Phe Gln Asn Lys Gln Thr Pro Ser  
 50 55 60  
 Val Asn Leu Ser  
 65

<210> 10167

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<211> 6  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10167  
 Lys Ser Ser Ser Ile Leu  
 1 5

<210> 10168  
 <211> 6  
 <212> PRT  
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<220>  
 <223> Inferred translation product

<400> 10168  
 Ala Leu Ser Leu His Gly  
 1 5

<210> 10169  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

<220>  
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<400> 10169  
 Asn Phe His Ser Thr Ser Ala  
 1 5

<210> 10170  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
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<400> 10170  
 Gly Thr His Leu Ile Ala Phe Gly Phe Pro Met Ser  
 1 5 10

<210> 10171  
 <211> 75  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10171  
 Arg Thr Gly Asn Leu Ser Ala Ser Asn Ala Asp Phe Thr Thr Met Cys  
 1 5 10 15

Cys Thr Phe Leu Gln Ala Glu Leu Thr Leu Ser Ser Ser Pro Ile Ile  
 20 25 30

Gly Tyr Ser Thr Asp Gln Ser Thr Arg Leu Thr Lys His Ser Trp Thr

35

40

45

Ala Lys His Leu Val Met Ile Ala Ser Gln Leu Ala Thr Cys Ala Phe  
50 55 60

Pro Cys Thr Trp Gln Cys Trp Ser Trp Leu Leu  
65 70 75

<210> 10172

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10172

Arg Leu Pro Val Lys Pro His Cys  
1 5

<210> 10173

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10173

Thr Ser Ile Ile Asn Gly Leu  
1 5

<210> 10174

<211> 5

<212> PRT

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<220>

<223> Inferred translation product

<400> 10174

Ser Lys Pro Thr Glu  
1 5

<210> 10175

<211> 4

<212> PRT

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<220>

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<400> 10175

Phe Gln Gln Ala  
1

<210> 10176

<211> 99

<212> PRT

<213> Artificial Sequence

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Val Ser Asp Glu Val Glu Lys Gln Val Ala Arg Leu Ser His Arg Gln  
1 5 10 15  
His Val Leu Ser Gly Pro Ile Leu Thr Lys Tyr Phe Ile Asp Val Ser  
20 25 30  
Ser Lys Pro Cys Ala Gln Arg Thr Asn Thr Thr Leu Ser Asp Asn Pro  
35 40 45  
Phe Ser Val Ser Leu Ser Ile Cys Thr Ile Leu Ile Arg Thr Thr Phe  
50 55 60  
Gln Gly Lys Pro Leu Tyr Met Ser Gly Ile Arg Cys Leu Asn Trp Ser  
65 70 75 80  
Pro Gly Gly Gly Phe Ala Leu Thr Leu Val Asn Ser Val Leu Phe Ser  
85 90 95  
Val Ser Thr

<210> 10177  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10177  
Pro Val Gly Thr Ala Thr Lys Leu Thr Pro Val Glu Asn Pro Ser Trp  
1 5 10 15  
Arg Gly Arg Leu Val Pro Thr Ala Ser Leu Val Ala  
20 25

<210> 10178  
<211> 12  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10178  
Gln Pro Ser Thr Ser Lys Pro Ile His Ala Arg Thr  
1 5 10

<210> 10179  
<211> 12  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10179  
Arg Ile Ala Ser Ser Arg Val Ile Asn Ile Leu Gly  
1 5 10

<210> 10180



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<211> 4  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10180  
 Pro Leu Thr Trp  
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<210> 10181  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10181  
 Phe Ile Leu Lys Pro Ile Ile Glu Met Ser Leu Arg  
 1 5 10

<210> 10182  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10182  
 Val Met Ser Phe Gly Tyr Ala  
 1 5

<210> 10183  
 <211> 5  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10183  
 Asn Ser Val Thr Trp  
 1 5

<210> 10184  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10184  
 Met Tyr Ser Thr Gly Tyr Lys Tyr Gln Ile Val Cys Lys Ser Ile Gly  
 1 5 10 15

<210> 10185  
 <211> 31  
 <212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10185

Ile Gln Gln Lys Ser Ser Tyr Tyr Met His Pro Ser Thr Val Gly Thr  
1 5 10 15

His Leu His Gly Val Cys Lys Gln His His Leu Asn Cys Ile Val  
20 25 30

<210> 10186

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10186

Val Glu His Asn Gln Tyr Pro Thr Leu Leu Val Cys His Glu Thr His  
1 5 10 15

Lys Asp Tyr Gln Asn Ser Lys Arg Lys Ala Ile Ala Leu Asn  
20 25 30

<210> 10187

<211> 58

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10187

Met His Phe Tyr Arg Lys Leu Glu Cys Gly Met His Ala Tyr Ser His  
1 5 10 15

Thr Asn Tyr His His His Ser Leu Val Ser Ser Ser Leu Thr Arg Leu  
20 25 30

Leu Cys Gln Thr Tyr Thr Gln Leu His Trp Leu Gly Asn Asp Gln Arg  
35 40 45

Tyr Asn Ser Lys Thr Asn Lys His His Gln  
50 55

<210> 10188

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10188

Ile Tyr Arg Asp Val  
1 5

<210> 10189

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10189

His Lys Asn Arg Arg Val Pro Leu Phe Cys Lys Leu Cys His Tyr Met  
1 5 10 15

Ala Glu His Arg Arg Thr Ser Ile Leu Leu Gln Pro Glu Ala His Thr  
20 25 30

<210> 10190

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10190

Pro Leu Asp Phe Leu Cys His Glu Glu Leu Glu Thr Tyr Gln Gln Ala  
1 5 10 15

Met Gln Thr Ser Gln Pro Cys Val Val Leu Phe Cys Lys Gln Asn  
20 25 30

<210> 10191

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10191

Pro Ser Val His Leu Leu  
1 5

<210> 10192

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10192

Gly Ile Gln Gln Thr Asn Gln Arg Ala  
1 5

<210> 10193

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10193

Gln Ser Thr His Gly Leu Leu Asn Ile  
1 5

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<210> 10194  
 <211> 20  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10194  
 Pro His Val His Phe His Val Pro Gly Asn Val Gly His Gly Tyr Ser  
 1 5 10 15  
 Glu Gly Tyr Pro  
 20

<210> 10195  
 <211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10195  
 Ser Pro Thr Ala Glu His Gln Ser  
 1 5

<210> 10196  
 <211> 21  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10196  
 Met Gly Tyr Arg His Ser Gln Asn Pro Gln Asn Asp Ser Ser Arg His  
 1 5 10 15  
 Lys Tyr Leu Met Lys  
 20

<210> 10197  
 <211> 18  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10197  
 Lys Ser Lys Leu His Val Cys His Thr Asp Asn Thr Phe Phe Gln Val  
 1 5 10 15  
 Gln Ser

<210> 10198  
 <211> 6  
 <212> PRT  
 <213> Artificial Sequence

SEQLIST-20480.TXT

<220>

<223> Inferred translation product

<400> 10198

Gln Ser Thr Ser Leu Met  
1 5

<210> 10199

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10199

Ala Gln Ser His Ala Pro Lys Gly Arg Thr Arg Leu Cys Leu Thr Ile  
1 5 10 15

Leu Ser Val Tyr His  
20

<210> 10200

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10200

Ala Phe Val Leu Ser  
1 5

<210> 10201

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10201

Tyr Ala Leu His Ser Arg Ala Ser Leu Tyr Thr  
1 5 10

<210> 10202

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10202

Thr Gly His Leu Val Glu Val Leu His  
1 5

<210> 10203

<211> 17

<212> PRT

<213> Artificial Sequence

SEQLIST-20480.TXT

<220>

<223> Inferred translation product

<400> 10203

Ile Leu Cys Tyr phe Gln Cys Gln His Asn Gln Ser Val Gln Leu Leu  
1 5 10 15

Ser

<210> 10204

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10204

Lys Ile Leu Ala Gly Glu Val Gly  
1 5

<210> 10205

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10205

Tyr Pro Gln His Leu  
1 5

<210> 10206

<211> 17

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10206

Leu His Asp Ser Pro Leu His Gln Ser Gln Ser Thr His Glu Arg Asp  
1 5 10 15

Glu

<210> 10207

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10207

Leu Leu Arg Gly  
1

<210> 10208

<211> 5

SEQLIST-20480.TXT

<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10208  
Leu Gly Asn Ser Phe  
1 5

<210> 10209  
<211> 12  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10209  
Val Tyr Gly Arg Ser Cys Pro Leu Gly Met Pro Arg  
1 5 10

<210> 10210  
<211> 481  
<212> PRT  
<213> SARS coronavirus

<400> 10210  
Met Thr Tyr Arg Arg Leu Ile Ser Met Met Gly Phe Lys Met Asn Tyr  
1 5 10 15

Gln Val Asn Gly Tyr Pro Asn Met Phe Ile Thr Arg Glu Glu Ala Ile  
20 25 30

Arg His Val Arg Ala Trp Ile Gly Phe Asp Val Glu Gly Cys His Ala  
35 40 45

Thr Arg Asp Ala Val Gly Thr Asn Leu Pro Leu Gln Leu Gly Phe Ser  
50 55 60

Thr Gly Val Asn Leu Val Ala Val Pro Thr Gly Tyr Val Asp Thr Glu  
65 70 75 80

Asn Asn Thr Glu Phe Thr Arg Val Asn Ala Lys Pro Pro Pro Gly Asp  
85 90 95

Gln Phe Lys His Leu Ile Pro Leu Met Tyr Lys Gly Leu Pro Trp Asn  
100 105 110

Val Val Arg Ile Lys Ile Val Gln Met Leu Ser Asp Thr Leu Lys Gly  
115 120 125

Leu Ser Asp Arg Val Val Phe Val Leu Trp Ala His Gly Phe Glu Leu  
130 135 140

Thr Ser Met Lys Tyr Phe Val Lys Ile Gly Pro Glu Arg Thr Cys Cys  
145 150 155 160

Leu Cys Asp Lys Arg Ala Thr Cys Phe Ser Thr Ser Ser Asp Thr Tyr  
165 170 175

Ala Cys Trp Asn His Ser Val Gly Phe Asp Tyr Val Tyr Asn Pro Phe  
180 185 190

SEQLIST-20480.TXT

Met Ile Asp Val Gln Gln Trp Gly Phe Thr Gly Asn Leu Gln Ser Asn  
195 200 205  
His Asp Gln His Cys Gln Val His Gly Asn Ala His Val Ala Ser Cys  
210 215 220  
Asp Ala Ile Met Thr Arg Cys Leu Ala Val His Glu Cys Phe Val Lys  
225 230 235 240  
Arg Val Asp Trp Ser Val Glu Tyr Pro Ile Ile Gly Asp Glu Leu Arg  
245 250 255  
Val Asn Ser Ala Cys Arg Lys Val Gln His Met Val Val Lys Ser Ala  
260 265 270  
Leu Leu Ala Asp Lys Phe Pro Val Leu His Asp Ile Gly Asn Pro Lys  
275 280 285  
Ala Ile Lys Cys Val Pro Gln Ala Glu Val Glu Trp Lys Phe Tyr Asp  
290 295 300  
Ala Gln Pro Cys Ser Asp Lys Ala Tyr Lys Ile Glu Glu Leu Phe Tyr  
305 310 315 320  
Ser Tyr Ala Ile His His Asp Lys Phe Thr Asp Gly Val Cys Leu Phe  
325 330 335  
Trp Asn Cys Asn Val Asp Arg Tyr Pro Ala Asn Ala Ile Val Cys Arg  
340 345 350  
Phe Asp Thr Arg Val Leu Ser Asn Leu Asn Leu Pro Gly Cys Asp Gly  
355 360 365  
Gly Ser Leu Tyr Val Asn Lys His Ala Phe His Thr Pro Ala Phe Asp  
370 375 380  
Lys Ser Ala Phe Thr Asn Leu Lys Gln Leu Pro Phe Phe Tyr Tyr Ser  
385 390 395 400  
Asp Ser Pro Cys Glu Ser His Gly Lys Gln Val Val Ser Asp Ile Asp  
405 410 415  
Tyr Val Pro Leu Lys Ser Ala Thr Cys Ile Thr Arg Cys Asn Leu Gly  
420 425 430  
Gly Ala Val Cys Arg His His Ala Asn Glu Tyr Arg Gln Tyr Leu Asp  
435 440 445  
Ala Tyr Asn Met Met Ile Ser Ala Gly Phe Ser Leu Trp Ile Tyr Lys  
450 455 460  
Gln Phe Asp Thr Tyr Asn Leu Trp Asn Thr Phe Thr Arg Leu Gln Ser  
465 470 475 480  
Leu

<210> 10211  
<211> 468  
<212> PRT  
<213> SARS coronavirus



SEQLIST-20480.TXT

<400> 10211  
Met Asn Tyr Gln Val Asn Gly Tyr Pro Asn Met Phe Ile Thr Arg Glu  
1 5 10 15  
Glu Ala Ile Arg His Val Arg Ala Trp Ile Gly Phe Asp Val Glu Gly  
20 25 30  
Cys His Ala Thr Arg Asp Ala Val Gly Thr Asn Leu Pro Leu Gln Leu  
35 40 45  
Gly Phe Ser Thr Gly Val Asn Leu Val Ala Val Pro Thr Gly Tyr Val  
50 55 60  
Asp Thr Glu Asn Asn Thr Glu Phe Thr Arg Val Asn Ala Lys Pro Pro  
65 70 75 80  
Pro Gly Asp Gln Phe Lys His Leu Ile Pro Leu Met Tyr Lys Gly Leu  
85 90 95  
Pro Trp Asn Val Val Arg Ile Lys Ile Val Gln Met Leu Ser Asp Thr  
100 105 110  
Leu Lys Gly Leu Ser Asp Arg Val Val Phe Val Leu Trp Ala His Gly  
115 120 125  
Phe Glu Leu Thr Ser Met Lys Tyr Phe Val Lys Ile Gly Pro Glu Arg  
130 135 140  
Thr Cys Cys Leu Cys Asp Lys Arg Ala Thr Cys Phe Ser Thr Ser Ser  
145 150 155 160  
Asp Thr Tyr Ala Cys Trp Asn His Ser Val Gly Phe Asp Tyr Val Tyr  
165 170 175  
Asn Pro Phe Met Ile Asp Val Gln Gln Trp Gly Phe Thr Gly Asn Leu  
180 185 190  
Gln Ser Asn His Asp Gln His Cys Gln Val His Gly Asn Ala His Val  
195 200 205  
Ala Ser Cys Asp Ala Ile Met Thr Arg Cys Leu Ala Val His Glu Cys  
210 215 220  
Phe Val Lys Arg Val Asp Trp Ser Val Glu Tyr Pro Ile Ile Gly Asp  
225 230 235 240  
Glu Leu Arg Val Asn Ser Ala Cys Arg Lys Val Gln His Met Val Val  
245 250 255  
Lys Ser Ala Leu Leu Ala Asp Lys Phe Pro Val Leu His Asp Ile Gly  
260 265 270  
Asn Pro Lys Ala Ile Lys Cys Val Pro Gln Ala Glu Val Glu Trp Lys  
275 280 285  
Phe Tyr Asp Ala Gln Pro Cys Ser Asp Lys Ala Tyr Lys Ile Glu Glu  
290 295 300  
Leu Phe Tyr Ser Tyr Ala Ile His His Asp Lys Phe Thr Asp Gly Val  
305 310 315 320  
Cys Leu Phe Trp Asn Cys Asn Val Asp Arg Tyr Pro Ala Asn Ala Ile  
325 330 335

SEQLIST-20480.TXT

Val Cys Arg Phe Asp Thr Arg Val Leu Ser Asn Leu Asn Leu Pro Gly  
 340 345 350  
 Cys Asp Gly Gly Ser Leu Tyr Val Asn Lys His Ala Phe His Thr Pro  
 355 360 365  
 Ala Phe Asp Lys Ser Ala Phe Thr Asn Leu Lys Gln Leu Pro Phe Phe  
 370 375 380  
 Tyr Tyr Ser Asp Ser Pro Cys Glu Ser His Gly Lys Gln Val Val Ser  
 385 390 395 400  
 Asp Ile Asp Tyr Val Pro Leu Lys Ser Ala Thr Cys Ile Thr Arg Cys  
 405 410 415  
 Asn Leu Gly Gly Ala Val Cys Arg His His Ala Asn Glu Tyr Arg Gln  
 420 425 430  
 Tyr Leu Asp Ala Tyr Asn Met Met Ile Ser Ala Gly Phe Ser Leu Trp  
 435 440 445  
 Ile Tyr Lys Gln Phe Asp Thr Tyr Asn Leu Trp Asn Thr Phe Thr Arg  
 450 455 460  
 Leu Gln Ser Leu  
 465  
 <210> 10212  
 <211> 458  
 <212> PRT  
 <213> SARS coronavirus  
 <400> 10212  
 Met Phe Ile Thr Arg Glu Glu Ala Ile Arg His Val Arg Ala Trp Ile  
 1 5 10 15  
 Gly Phe Asp Val Glu Gly Cys His Ala Thr Arg Asp Ala Val Gly Thr  
 20 25 30  
 Asn Leu Pro Leu Gln Leu Gly Phe Ser Thr Gly Val Asn Leu Val Ala  
 35 40 45  
 Val Pro Thr Gly Tyr Val Asp Thr Glu Asn Asn Thr Glu Phe Thr Arg  
 50 55 60  
 Val Asn Ala Lys Pro Pro Pro Gly Asp Gln Phe Lys His Leu Ile Pro  
 65 70 75 80  
 Leu Met Tyr Lys Gly Leu Pro Trp Asn Val Val Arg Ile Lys Ile Val  
 85 90 95  
 Gln Met Leu Ser Asp Thr Leu Lys Gly Leu Ser Asp Arg Val Val Phe  
 100 105 110  
 Val Leu Trp Ala His Gly Phe Glu Leu Thr Ser Met Lys Tyr Phe Val  
 115 120 125  
 Lys Ile Gly Pro Glu Arg Thr Cys Cys Leu Cys Asp Lys Arg Ala Thr  
 130 135 140  
 Cys Phe Ser Thr Ser Ser Asp Thr Tyr Ala Cys Trp Asn His Ser Val  
 145 150 155 160

SEQLIST-20480.TXT

Gly Phe Asp Tyr Val Tyr Asn Pro Phe Met Ile Asp Val Gln Gln Trp  
165 170 175  
Gly Phe Thr Gly Asn Leu Gln Ser Asn His Asp Gln His Cys Gln Val  
180 185 190  
His Gly Asn Ala His Val Ala Ser Cys Asp Ala Ile Met Thr Arg Cys  
195 200 205  
Leu Ala Val His Glu Cys Phe Val Lys Arg Val Asp Trp Ser Val Glu  
210 215 220  
Tyr Pro Ile Ile Gly Asp Glu Leu Arg Val Asn Ser Ala Cys Arg Lys  
225 230 235 240  
Val Gln His Met Val Val Lys Ser Ala Leu Leu Ala Asp Lys Phe Pro  
245 250 255  
Val Leu His Asp Ile Gly Asn Pro Lys Ala Ile Lys Cys Val Pro Gln  
260 265 270  
Ala Glu Val Glu Trp Lys Phe Tyr Asp Ala Gln Pro Cys Ser Asp Lys  
275 280 285  
Ala Tyr Lys Ile Glu Glu Leu Phe Tyr Ser Tyr Ala Ile His His Asp  
290 295 300  
Lys Phe Thr Asp Gly Val Cys Leu Phe Trp Asn Cys Asn Val Asp Arg  
305 310 315 320  
Tyr Pro Ala Asn Ala Ile Val Cys Arg Phe Asp Thr Arg Val Leu Ser  
325 330 335  
Asn Leu Asn Leu Pro Gly Cys Asp Gly Gly Ser Leu Tyr Val Asn Lys  
340 345 350  
His Ala Phe His Thr Pro Ala Phe Asp Lys Ser Ala Phe Thr Asn Leu  
355 360 365  
Lys Gln Leu Pro Phe Phe Tyr Tyr Ser Asp Ser Pro Cys Glu Ser His  
370 375 380  
Gly Lys Gln Val Val Ser Asp Ile Asp Tyr Val Pro Leu Lys Ser Ala  
385 390 395 400  
Thr Cys Ile Thr Arg Cys Asn Leu Gly Gly Ala Val Cys Arg His His  
405 410 415  
Ala Asn Glu Tyr Arg Gln Tyr Leu Asp Ala Tyr Asn Met Met Ile Ser  
420 425 430  
Ala Gly Phe Ser Leu Trp Ile Tyr Lys Gln Phe Asp Thr Tyr Asn Leu  
435 440 445  
Trp Asn Thr Phe Thr Arg Leu Gln Ser Leu  
450 455

<210> 10213  
<211> 254  
<212> PRT  
<213> SARS coronavirus

SEQLIST-20480.TXT

<400> 10213

Met Thr Arg Cys Leu Ala Val His Glu Cys Phe Val Lys Arg Val Asp  
1 5 10 15  
Trp Ser Val Glu Tyr Pro Ile Ile Gly Asp Glu Leu Arg Val Asn Ser  
20 25 30  
Ala Cys Arg Lys Val Gln His Met Val Val Lys Ser Ala Leu Leu Ala  
35 40 45  
Asp Lys Phe Pro Val Leu His Asp Ile Gly Asn Pro Lys Ala Ile Lys  
50 55 60  
Cys Val Pro Gln Ala Glu Val Glu Trp Lys Phe Tyr Asp Ala Gln Pro  
65 70 75 80  
Cys Ser Asp Lys Ala Tyr Lys Ile Glu Glu Leu Phe Tyr Ser Tyr Ala  
85 90 95  
Ile His His Asp Lys Phe Thr Asp Gly Val Cys Leu Phe Trp Asn Cys  
100 105 110  
Asn Val Asp Arg Tyr Pro Ala Asn Ala Ile Val Cys Arg Phe Asp Thr  
115 120 125  
Arg Val Leu Ser Asn Leu Asn Leu Pro Gly Cys Asp Gly Gly Ser Leu  
130 135 140  
Tyr Val Asn Lys His Ala Phe His Thr Pro Ala Phe Asp Lys Ser Ala  
145 150 155 160  
Phe Thr Asn Leu Lys Gln Leu Pro Phe Phe Tyr Tyr Ser Asp Ser Pro  
165 170 175  
Cys Glu Ser His Gly Lys Gln Val Val Ser Asp Ile Asp Tyr Val Pro  
180 185 190  
Leu Lys Ser Ala Thr Cys Ile Thr Arg Cys Asn Leu Gly Gly Ala Val  
195 200 205  
Cys Arg His His Ala Asn Glu Tyr Arg Gln Tyr Leu Asp Ala Tyr Asn  
210 215 220  
Met Met Ile Ser Ala Gly Phe Ser Leu Trp Ile Tyr Lys Gln Phe Asp  
225 230 235 240  
Thr Tyr Asn Leu Trp Asn Thr Phe Thr Arg Leu Gln Ser Leu  
245 250

<210> 10214

<211> 215

<212> PRT

<213> SARS coronavirus

<400> 10214

Met Val Val Lys Ser Ala Leu Leu Ala Asp Lys Phe Pro Val Leu His  
1 5 10 15  
Asp Ile Gly Asn Pro Lys Ala Ile Lys Cys Val Pro Gln Ala Glu Val  
20 25 30  
Glu Trp Lys Phe Tyr Asp Ala Gln Pro Cys Ser Asp Lys Ala Tyr Lys  
35 40 45

SEQLIST-20480.TXT

Ile Glu Glu Leu Phe Tyr Ser Tyr Ala Ile His His Asp Lys Phe Thr  
50 55 60  
Asp Gly Val Cys Leu Phe Trp Asn Cys Asn Val Asp Arg Tyr Pro Ala  
65 70 75 80  
Asn Ala Ile Val Cys Arg Phe Asp Thr Arg Val Leu Ser Asn Leu Asn  
85 90 95  
Leu Pro Gly Cys Asp Gly Gly Ser Leu Tyr Val Asn Lys His Ala Phe  
100 105 110  
His Thr Pro Ala Phe Asp Lys Ser Ala Phe Thr Asn Leu Lys Gln Leu  
115 120 125  
Pro Phe Phe Tyr Tyr Ser Asp Ser Pro Cys Glu Ser His Gly Lys Gln  
130 135 140  
Val Val Ser Asp Ile Asp Tyr Val Pro Leu Lys Ser Ala Thr Cys Ile  
145 150 155 160  
Thr Arg Cys Asn Leu Gly Gly Ala Val Cys Arg His His Ala Asn Glu  
165 170 175  
Tyr Arg Gln Tyr Leu Asp Ala Tyr Asn Met Met Ile Ser Ala Gly Phe  
180 185 190  
Ser Leu Trp Ile Tyr Lys Gln Phe Asp Thr Tyr Asn Leu Trp Asn Thr  
195 200 205  
Phe Thr Arg Leu Gln Ser Leu  
210 215

<210> 10215  
<211> 75  
<212> PRT  
<213> SARS coronavirus

<400> 10215  
His Gly Lys Gln Val Val Ser Asp Ile Asp Tyr Val Pro Leu Lys Ser  
1 5 10 15  
Ala Thr Cys Ile Thr Arg Cys Asn Leu Gly Gly Ala Val Cys Arg His  
20 25 30  
His Ala Asn Glu Tyr Arg Gln Tyr Leu Asp Ala Tyr Asn Met Met Ile  
35 40 45  
Ser Ala Gly Phe Ser Leu Trp Ile Tyr Lys Gln Phe Asp Thr Tyr Asn  
50 55 60  
Leu Trp Asn Thr Phe Thr Arg Leu Gln Ser Leu  
65 70 75

<210> 10216  
<211> 1152  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Fusion protein - SARS and bovine coronaviruses

SEQLIST-20480.TXT

<400> 10216

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Met Thr Tyr Arg Arg Leu Ile Ser Met Met Gly Phe Lys Met Asn Tyr
1      5      10      15
Gln Val Asn Gly Tyr Pro Asn Met Phe Ile Thr Arg Glu Glu Ala Ile
      20      25      30
Arg His Val Arg Ala Trp Ile Gly Phe Asp Val Glu Gly Cys His Ala
      35      40      45
Thr Arg Asp Ala Val Gly Thr Asn Leu Pro Leu Gln Leu Gly Phe Ser
      50      55      60
Thr Gly Val Asn Leu Val Ala Val Pro Thr Gly Tyr Val Asp Thr Glu
      65      70      75      80
Asn Asn Thr Glu Phe Thr Arg Val Asn Ala Lys Pro Pro Pro Gly Asp
      85      90      95
Gln Phe Lys His Leu Ile Pro Leu Met Tyr Lys Gly Leu Pro Trp Asn
      100      105      110
Val Val Arg Ile Lys Ile Val Gln Met Leu Ser Asp Thr Leu Lys Gly
      115      120      125
Leu Ser Asp Arg Val Val Phe Val Leu Trp Ala His Gly Phe Glu Leu
      130      135      140
Thr Ser Met Lys Tyr Phe Val Lys Ile Gly Pro Glu Arg Thr Cys Cys
      145      150      155      160
Leu Cys Asp Lys Arg Ala Thr Cys Phe Ser Thr Ser Ser Asp Thr Tyr
      165      170      175
Ala Cys Trp Asn His Ser Val Gly Phe Asp Tyr Val Tyr Asn Pro Phe
      180      185      190
Met Ile Asp Val Gln Gln Trp Gly Phe Thr Gly Asn Leu Gln Ser Asn
      195      200      205
His Asp Gln His Cys Gln Val His Gly Asn Ala His Val Ala Ser Cys
      210      215      220
Asp Ala Ile Met Thr Arg Cys Leu Ala Val His Glu Cys Phe Val Lys
      225      230      235      240
Arg Val Asp Trp Ser Val Glu Tyr Pro Ile Ile Gly Asp Glu Leu Arg
      245      250      255
Val Asn Ser Ala Cys Arg Lys Val Gln His Met Val Val Lys Ser Ala
      260      265      270
Leu Leu Ala Asp Lys Phe Pro Val Leu His Asp Ile Gly Asn Pro Lys
      275      280      285
Ala Ile Lys Cys Val Pro Gln Ala Glu Val Glu Trp Lys Phe Tyr Asp
      290      295      300
Ala Gln Pro Cys Ser Asp Lys Ala Tyr Lys Ile Glu Glu Leu Phe Tyr
      305      310      315      320
Ser Tyr Ala Ile His His Asp Lys Phe Thr Asp Gly Val Cys Leu Phe
      325      330      335

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SEQLIST-20480.TXT

Trp Asn Cys Asn Val Asp Arg Tyr Pro Ala Asn Ala Ile Val Cys Arg  
 340 345 350  
 Phe Asp Thr Arg Val Leu Ser Asn Leu Asn Leu Pro Gly Cys Asp Gly  
 355 360 365  
 Gly Ser Leu Tyr Val Asn Lys His Ala Phe His Thr Pro Ala Phe Asp  
 370 375 380  
 Lys Ser Ala Phe Thr Asn Leu Lys Gln Leu Pro Phe Phe Tyr Tyr Ser  
 385 390 395 400  
 Asp Ser Pro Cys Glu Ser His Gly Lys Gln Val Val Ser Asp Ile Asp  
 405 410 415  
 Tyr Val Pro Leu Lys Ser Ala Thr Cys Ile Thr Arg Cys Asn Leu Gly  
 420 425 430  
 Gly Ala Val Cys Arg His His Ala Asn Glu Tyr Arg Gln Tyr Leu Asp  
 435 440 445  
 Ala Tyr Asn Met Met Ile Ser Ala Gly Phe Ser Leu Trp Ile Tyr Lys  
 450 455 460  
 Gln Phe Asp Thr Tyr Asn Leu Trp Asn Thr Phe Thr Arg Leu Gln Ser  
 465 470 475 480  
 Leu Glu Asn Val Val Tyr Asn Leu Val Lys Thr Gly His Tyr Thr Gly  
 485 490 495  
 Gln Ala Gly Glu Met Pro Cys Ala Ile Ile Asn Asp Lys Val Val Ala  
 500 505 510  
 Lys Ile Asp Lys Glu Asp Val Val Ile Phe Ile Asn Asn Thr Thr Tyr  
 515 520 525  
 Pro Thr Asn Val Ala Val Glu Leu Phe Ala Lys Arg Ser Ile Arg His  
 530 535 540  
 His Pro Glu Leu Lys Leu Phe Arg Asn Leu Asn Ile Asp Val Cys Trp  
 545 550 555 560  
 Lys His Val Ile Trp Asp Tyr Ala Arg Glu Ser Ile Phe Cys Ser Asn  
 565 570 575  
 Thr Tyr Gly Val Cys Met Tyr Thr Asp Leu Lys Phe Ile Asp Lys Leu  
 580 585 590  
 Asn Val Leu Phe Asp Gly Arg Asp Asn Gly Ala Leu Glu Ala Phe Lys  
 595 600 605  
 Arg Ser Asn Asn Gly Val Tyr Ile Ser Thr Thr Lys Val Lys Ser Leu  
 610 615 620  
 Ser Met Ile Lys Gly Pro Pro Arg Ala Glu Leu Asn Gly Val Val Val  
 625 630 635 640  
 Asp Lys Val Gly Asp Thr Asp Cys Val Phe Tyr Phe Ala Val Arg Lys  
 645 650 655  
 Glu Gly Gln Asp Val Ile Phe Ser Gln Phe Asp Ser Leu Arg Val Ser  
 660 665 670

SEQLIST-20480.TXT

Ser Asn Gln Ser Pro Gln Gly Asn Leu Gly Ser Asn Glu Pro Gly Asn  
 675 680 685  
 Val Gly Gly Asn Asp Ala Leu Ala Thr Ser Thr Ile Phe Thr Gln Ser  
 690 695 700  
 Arg Val Ile Ser Ser Phe Thr Cys Arg Thr Asp Met Glu Lys Asp Phe  
 705 710 715 720  
 Ile Ala Leu Asp Gln Asp Leu Phe Ile Gln Lys Tyr Gly Leu Glu Asp  
 725 730 735  
 Tyr Ala Phe Glu His Ile Val Tyr Gly Asn Phe Asn Gln Lys Ile Ile  
 740 745 750  
 Gly Gly Leu His Leu Leu Ile Gly Leu Tyr Arg Arg Gln Gln Thr Ser  
 755 760 765  
 Asn Leu Val Ile Gln Glu Phe Val Ser Tyr Asp Ser Ser Ile His Ser  
 770 775 780  
 Tyr Phe Ile Thr Asp Glu Lys Ser Gly Gly Ser Lys Ser Val Cys Thr  
 785 790 795 800  
 Val Ile Asp Ile Leu Leu Asp Asp Phe Val Ala Leu Val Lys Ser Leu  
 805 810 815  
 Asn Leu Asn Cys Val Ser Lys Val Val Asn Val Asn Val Asp Phe Lys  
 820 825 830  
 Asp Phe Gln Phe Met Leu Trp Cys Asn Asp Glu Lys Val Met Thr Phe  
 835 840 845  
 Tyr Pro Arg Leu Gln Ala Ala Ser Asp Trp Lys Pro Gly Tyr Ser Met  
 850 855 860  
 Pro Val Leu Tyr Lys Tyr Leu Asn Ser Pro Met Glu Arg Val Ser Leu  
 865 870 875 880  
 Trp Asn Tyr Gly Lys Pro Val Thr Leu Pro Thr Gly Cys Met Met Asn  
 885 890 895  
 Val Ala Lys Tyr Thr Gln Leu Cys Gln Tyr Leu Asn Thr Thr Thr Leu  
 900 905 910  
 Ala Val Pro Val Asn Met Arg Val Leu His Leu Gly Ala Gly Ser Glu  
 915 920 925  
 Lys Gly Val Ala Pro Gly Ser Ala Val Leu Arg Gln Trp Leu Pro Ala  
 930 935 940  
 Gly Thr Ile Leu Val Asp Asn Asp Leu Tyr Pro Phe Val Ser Asp Ser  
 945 950 955 960  
 Val Ala Thr Tyr Phe Gly Asp Cys Ile Thr Leu Pro Phe Asp Cys Gln  
 965 970 975  
 Trp Asp Leu Ile Ile Ser Asp Met Tyr Asp Pro Ile Thr Lys Asn Ile  
 980 985 990  
 Gly Glu Tyr Asn Val Ser Lys Asp Gly Phe Phe Thr Tyr Ile Cys His  
 995 1000 1005



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Met Ile Arg Asp Lys Leu Ala Leu Gly Gly Ser Val Ala Ile Lys Ile  
1010 1015 1020  
Thr Glu Phe Ser Trp Asn Ala Glu Leu Tyr Lys Leu Met Gly Tyr Phe  
1025 1030 1035 1040  
Ala Phe Trp Thr Val Phe Cys Thr Asn Ala Asn Ala Ser Ser Ser Glu  
1045 1050 1055  
Gly Phe Leu Ile Gly Ile Asn Tyr Leu Gly Lys Pro Lys Val Glu Ile  
1060 1065 1070  
Asp Gly Asn Val Met His Ala Asn Tyr Leu Phe Trp Arg Asn Ser Thr  
1075 1080 1085  
Val Trp Asn Gly Gly Ala Tyr Ser Leu Phe Asp Met Ala Lys Phe Pro  
1090 1095 1100  
Leu Lys Leu Ala Gly Thr Ala Val Ile Asn Leu Arg Ala Asp Gln Ile  
1105 1110 1115 1120  
Asn Asp Met Val Tyr Ser Leu Leu Glu Lys Gly Lys Leu Leu Val Arg  
1125 1130 1135  
Asp Thr Asn Lys Glu Val Phe Val Gly Asp Ser Leu Val Asn Val Ile  
1140 1145 1150

<210> 10217  
<211> 671  
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<400> 10217  
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Ala Gly Glu Met Pro Cys Ala Ile Ile Asn Asp Lys Val Val Ala Lys  
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Ile Asp Lys Glu Asp Val Val Ile Phe Ile Asn Asn Thr Thr Tyr Pro  
35 40 45  
Thr Asn Val Ala Val Glu Leu Phe Ala Lys Arg Ser Ile Arg His His  
50 55 60  
Pro Glu Leu Lys Leu Phe Arg Asn Leu Asn Ile Asp Val Cys Trp Lys  
65 70 75 80  
His Val Ile Trp Asp Tyr Ala Arg Glu Ser Ile Phe Cys Ser Asn Thr  
85 90 95  
Tyr Gly Val Cys Met Tyr Thr Asp Leu Lys Phe Ile Asp Lys Leu Asn  
100 105 110  
Val Leu Phe Asp Gly Arg Asp Asn Gly Ala Leu Glu Ala Phe Lys Arg  
115 120 125  
Ser Asn Asn Gly Val Tyr Ile Ser Thr Thr Lys Val Lys Ser Leu Ser  
130 135 140  
Met Ile Lys Gly Pro Pro Arg Ala Glu Leu Asn Gly Val Val Val Asp

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145		150		155		160
Lys Val Gly Asp Thr	Asp Cys Val Phe Tyr	Phe Ala Val Arg Lys	Glu			
	165		170			175
Gly Gln Asp Val Ile Phe Ser Gln Phe	Asp Ser Leu Arg Val Ser Ser					
	180		185		190	
Asn Gln Ser Pro Gln Gly Asn Leu Gly Ser Asn Glu Pro Gly Asn Val						
	195		200		205	
Gly Gly Asn Asp Ala Leu Ala Thr Ser Thr Ile Phe Thr Gln Ser Arg						
	210		215		220	
Val Ile Ser Ser Phe Thr Cys Arg Thr Asp Met Glu Lys Asp Phe Ile						
	225		230		235	240
Ala Leu Asp Gln Asp Leu Phe Ile Gln Lys Tyr Gly Leu Glu Asp Tyr						
	245		250		255	
Ala Phe Glu His Ile Val Tyr Gly Asn Phe Asn Gln Lys Ile Ile Gly						
	260		265		270	
Gly Leu His Leu Leu Ile Gly Leu Tyr Arg Arg Gln Gln Thr Ser Asn						
	275		280		285	
Leu Val Ile Gln Glu Phe Val Ser Tyr Asp Ser Ser Ile His Ser Tyr						
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Phe Ile Thr Asp Glu Lys Ser Gly Gly Ser Lys Ser Val Cys Thr Val						
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Ile Asp Ile Leu Leu Asp Asp Phe Val Ala Leu Val Lys Ser Leu Asn						
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Leu Asn Cys Val Ser Lys Val Val Asn Val Asn Val Asp Phe Lys Asp						
	340		345		350	
Phe Gln Phe Met Leu Trp Cys Asn Asp Glu Lys Val Met Thr Phe Tyr						
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Pro Arg Leu Gln Ala Ala Ser Asp Trp Lys Pro Gly Tyr Ser Met Pro						
	370		375		380	
Val Leu Tyr Lys Tyr Leu Asn Ser Pro Met Glu Arg Val Ser Leu Trp						
	385		390		395	400
Asn Tyr Gly Lys Pro Val Thr Leu Pro Thr Gly Cys Met Met Asn Val						
	405		410		415	
Ala Lys Tyr Thr Gln Leu Cys Gln Tyr Leu Asn Thr Thr Thr Leu Ala						
	420		425		430	
Val Pro Val Asn Met Arg Val Leu His Leu Gly Ala Gly Ser Glu Lys						
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Gly Val Ala Pro Gly Ser Ala Val Leu Arg Gln Trp Leu Pro Ala Gly						
	450		455		460	
Thr Ile Leu Val Asp Asn Asp Leu Tyr Pro Phe Val Ser Asp Ser Val						
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Ala Thr Tyr Phe Gly Asp Cys Ile Thr Leu Pro Phe Asp Cys Gln Trp						

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485

490

495

Asp Leu Ile Ile Ser Asp Met Tyr Asp Pro Ile Thr Lys Asn Ile Gly  
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Glu Tyr Asn Val Ser Lys Asp Gly Phe Phe Thr Tyr Ile Cys His Met  
515 520 525  
Ile Arg Asp Lys Leu Ala Leu Gly Gly Ser Val Ala Ile Lys Ile Thr  
530 535 540  
Glu Phe Ser Trp Asn Ala Glu Leu Tyr Lys Leu Met Gly Tyr Phe Ala  
545 550 555 560  
Phe Trp Thr Val Phe Cys Thr Asn Ala Asn Ala Ser Ser Ser Glu Gly  
565 570 575  
Phe Leu Ile Gly Ile Asn Tyr Leu Gly Lys Pro Lys Val Glu Ile Asp  
580 585 590  
Gly Asn Val Met His Ala Asn Tyr Leu Phe Trp Arg Asn Ser Thr Val  
595 600 605  
Trp Asn Gly Gly Ala Tyr Ser Leu Phe Asp Met Ala Lys Phe Pro Leu  
610 615 620  
Lys Leu Ala Gly Thr Ala Val Ile Asn Leu Arg Ala Asp Gln Ile Asn  
625 630 635 640  
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<210> 10219  
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<210> 10220  
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<400> 10220  
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Thr Thr Trp Leu Ser Ile Val Glu Leu Pro Phe Tyr Phe Ser Leu Arg

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20

25

30

His Thr Leu Asp Ser Leu Trp Ile Ser Tyr Val Met Lys Asn Trp Lys  
 35 40 45  
 Leu Ile Ser Lys Gln Cys Arg Leu His Asn His Val Leu Tyr Phe Ser  
 50 55 60  
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 65 70 75 80  
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<400> 10221  
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 Val Leu Tyr Phe Ser Ala Ser Arg Ile Asn Pro Gln Phe Ile Ser Tyr  
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 35 40 45  
 Asp Cys  
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<400> 10222  
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 Val Thr Arg Lys Ala Pro Leu Leu Asn Ile Asn His Lys Trp Val Ile  
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 Asp Ile Val Lys Thr His Arg Met Ile Pro Ala Gly Ile Ser Ile  
 35 40 45

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<400> 10223  
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 35 40

<210> 10224

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<211> 39  
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<400> 10224  
 Met Leu Val Met Val Thr Leu Lys Val Thr Arg Lys Ala Pro Leu Leu  
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<210> 10225  
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 <212> PRT  
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<400> 10225  
 Met Val Thr Leu Lys Val Thr Arg Lys Ala Pro Leu Leu Asn Ile Asn  
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 20 25 30  
 Gly Ile Ser Ile  
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<400> 10226  
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<210> 10227  
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<400> 10227  
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 Ser Phe Phe Ala Gly Asp Lys His Ile Arg Val Thr Ile Asp Leu Val  
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 Ile His Phe Glu Thr His His Arg Asp Glu Ser Thr Val Gly His Val  
 35 40 45  
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 <213> SARS coronavirus

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<400> 10228  
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 20 25 30  
 Trp Thr Ala Lys His Leu Val Met Ile Ala Ser Gln Leu Ala Thr Cys  
 35 40 45  
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 50 55 60

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<400> 10229  
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<210>   10250

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<210> 10252
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caagtagtgtc cggatattga tt              22
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<210> 10299
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ctgaaatttc attcatgctt tgggtgaagg atggacatgt tgaaaccttc taccctaaac 180
tacaagcaag tcaagcgtgg caaccagggtg ttgcatgccc taacttgtag aagatgcaaa 240
gaatgcttct tgaaaagtgt gaccttcaga attatggtga aaatgctgtt ataccctaaag 300
gaataatgat gaatgtcgca aagtatactc aactgtgtca atacttaaat acacttactt 360
tagctgtacc ctccaacatg agagttattc actttggtgc tgg 403

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Ser His Lys Ile Cys Gln  
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Cys Phe Gly Val Arg Met Asp Met Leu Lys Pro Ser Thr Gln Asn Tyr  
20 25 30

Lys Gln Val Lys Arg Gly Asn Gln Val Leu Arg Cys Leu Thr Cys Thr  
35 40 45

Arg Cys Lys Glu Cys Phe Leu Lys Ser Val Thr Phe Arg Ile Met Val  
50 55 60

Lys Met Leu Leu Tyr Gln Lys Glu  
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Val Lys Val Thr Ile Asp Tyr Ala Glu Ile Ser Phe Met Leu Trp Cys  
35 40 45

Lys Asp Gly His Val Glu Thr Phe Tyr Pro Lys Leu Gln Ala Ser Gln  
50 55 60

Ala Trp Gln Pro Gly Val Ala Met Pro Asn Leu Tyr Lys Met Gln Arg  
65 70 75 80

Met Leu Leu Glu Lys Cys Asp Leu Gln Asn Tyr Gly Glu Asn Ala Val  
85 90 95

Ile Pro Lys Gly Ile Met Met Asn Val Ala Lys Tyr Thr Gln Leu Cys  
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Gln Tyr Leu Asn Thr Leu Thr Leu Ala Val Pro Ser Asn Met Arg Val  
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Trp Tyr Asn Ser Ile Phe Thr Ile Ile Leu Lys Val Thr Leu Phe Lys  
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Lys His Ser Leu His Leu Val Gln Val Arg His Arg Asn Thr Trp Leu  
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Pro Arg Leu Thr Cys Leu  
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Lys Met Gln Arg Met Leu Leu Glu Lys Cys Asp Leu Gln Asn Tyr Gly
35              40              45
Glu Asn Ala Val Ile Pro Lys Gly Ile Met Met Asn Val Ala Lys Tyr
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Thr Gln Leu Cys Gln Tyr Leu Asn Thr Leu Thr Leu Ala Val Pro Ser
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Asn Met Arg Val Ile His Phe Gly Ala Gly
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Pro Lys Leu Gln Ala Ser Gln Ala Trp Gln Pro Gly Val Ala Met Pro

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Asn Leu Tyr Lys Met Gln Arg Met Leu Leu Glu Lys Cys Asp Leu Gln  
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85 90 95

Val Pro Ser Asn Met Arg Val Ile His Phe Gly Ala Gly  
100 105

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20 25 30

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35 40 45

Thr Phe Arg Ile Met Val Lys Met Leu Leu Tyr Gln Lys Glu  
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Gln Val Lys Asp Gln Ser Gln Asn Thr His Ile Leu Met Asn Leu  
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 Met Gln Arg Met Leu Leu Glu Lys Cys Asp Leu Gln Asn Tyr Gly Glu  
 35 40 45  
 Asn Ala Val Ile Pro Lys Gly Ile Met Met Asn Val Ala Lys Tyr Thr  
 50 55 60  
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 Met Arg Val Ile His Phe Gly Ala Gly  
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 Lys Leu Gln Ala Ser Gln Ala Trp Gln Pro Gly Val Ala Met Pro Asn  
 35 40 45  
 Leu Tyr Lys Met Gln Arg Met Leu Leu Glu Lys Cys Asp Leu Gln Asn  
 50 55 60  
 Tyr Gly Glu Asn Ala Val Ile Pro Lys Gly Ile Met Met Asn Val Ala  
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Leu Phe Ser Lys Arg Thr Asn  
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<210> 10507  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10507  
 Trp Thr Pro Ile Lys Pro Thr  
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<210> 10508  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10508  
 Cys Pro Pro His Tyr Ile Trp Trp Thr His Arg Phe Asn  
 1 5 10

<210> 10509  
 <211> 74  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10509  
 Pro Glu Trp Arg Thr Ala Met Gly Gln Gly Gln Asn Ser Ala Asp Pro  
 1 5 10 15

Lys Val Tyr Pro Ile Ile Leu Arg Leu Gly Ser Gln Leu Ser Leu Ser  
 20 25 30

Met Ala Arg Arg Asn Leu Asp Ser Leu Glu Ala Arg Ala Phe Gln Ser

35 40 45  
 Thr Pro Ile Val Val Gln Met Thr Lys Leu Ala Thr Thr Glu Glu Leu  
 50 55 60

Pro Asp Glu Phe Val Val Val Thr Ala Lys  
 65 70

<210> 10510  
 <211> 11  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10510  
 Lys Ser Ser Ala Pro Asp Gly Thr Ser Ile Thr  
 1 5 10

<210> 10511  
 <211> 25  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10511  
 Glu Leu Ala Gln Lys Leu His Phe Pro Thr Ala Leu Thr Lys Lys Ala  
 1 5 10 15

Ser Tyr Gly Leu Gln Leu Arg Glu Pro  
 20 25

<210> 10512  
 <211> 84  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10512  
 Ile His Pro Lys Thr Thr Leu Ala Pro Ala Ile Leu Ile Thr Met Leu  
 1 5 10 15

Pro Pro Cys Tyr Asn Phe Leu Lys Glu Gln His Cys Gln Lys Ala Ser  
 20 25 30

Thr Gln Arg Glu Ala Glu Ala Ala Val Lys Pro Leu Leu Ala Pro His  
 35 40 45

His Val Val Ala Val Ile Gln Glu Ile Gln Leu Leu Ala Ala Val Gly  
 50 55 60

Glu Ile Leu Leu Leu Glu Trp Leu Ala Glu Val Val Lys Leu Pro Ser  
 65 70 75 80

Arg Tyr Cys Cys

<210> 10513

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<211> 63  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10513  
 Thr Ser Leu Arg Ala Lys Phe Leu Val Lys Ala Asn Asn Asn Lys Ala  
 1 5 10 15  
 Lys Leu Ser Leu Arg Asn Leu Leu Leu Arg His Leu Lys Ser Leu Ala  
 20 25 30  
 Lys Asn Val Leu Pro Gln Asn Ser Thr Thr Ser Leu Lys His Leu Gly  
 35 40 45  
 Asp Val Val Gln Asn Lys Pro Lys Glu Ile Ser Gly Thr Lys Thr  
 50 55 60

<210> 10514  
 <211> 17  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10514  
 Ser Asp Lys Glu Leu Ile Thr Asn Ile Gly Pro Gln Ile Ala Gln Phe  
 1 5 10 15  
 Ala

<210> 10515  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10515  
 Arg Phe Leu Pro Thr Gln Glu Lys Pro Thr Asn Leu Asp Leu Leu  
 1 5 10 15

<210> 10516  
 <211> 57  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10516  
 Ile Cys Ser Leu Asn Glu Gln Ile Lys Met Ser Asp Asn Gly Pro Gln  
 1 5 10 15  
 Ser Asn Gln Arg Ser Ala Pro Arg Ile Thr Phe Gly Gly Pro Thr Asp  
 20 25 30  
 Ser Thr Asp Asn Asn Gln Asn Gly Gly Leu Gln Trp Gly Lys Ala Lys

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35                               40
                                45
Thr Ala Pro Thr Pro Arg Phe Thr Gln
 50                    55

<210> 10517
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Inferred translation product

<400> 10517
Tyr Cys Val Leu Val His Ser Ser His Ser Ala Trp Gln Gly Gly Thr
 1                    5                    10                    15

<210> 10518
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Inferred translation product

<400> 10518
Ile Pro Ser Arg Pro Gly Arg Ser Asn Gln His Gln
 1                    5                    10

<210> 10519
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Inferred translation product

<400> 10519
Pro Asn Trp Leu Leu Pro Lys Ser Tyr Pro Thr Ser Ser Trp Trp
 1                    5                    10                    15

<210> 10520
<211> 27
<212> PRT
<213> Artificial Sequence

<220>
<223> Inferred translation product

<400> 10520
Arg Gln Asn Glu Arg Ala Gln Pro Gln Met Val Leu Leu Leu Pro Arg
 1                    5                    10                    15

Asn Trp Pro Arg Ser Phe Thr Ser Leu Arg Arg
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<210> 10521
<211> 9
<212> PRT
<213> Artificial Sequence

<220>

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<223> Inferred translation product

<400> 10521  
Gln Arg Arg His Arg Met Gly Cys Asn  
1 5

<210> 10522  
<211> 15  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10522  
Gly Ser Leu Glu Tyr Thr Gln Arg Pro His Trp His Pro Gln Ser  
1 5 10 15

<210> 10523  
<211> 36  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10523  
Gln Cys Cys His Arg Ala Thr Thr Ser Ser Arg Asn Asn Ile Ala Lys  
1 5 10 15  
Arg Leu Leu Arg Arg Gly Lys Gln Arg Arg Gln Ser Ser Leu Phe Ser  
20 25 30

Leu Leu Ile Thr  
35

<210> 10524  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10524  
Phe Lys Lys Phe Asn Ser Trp Gln Gln  
1 5

<210> 10525  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10525  
Gly Lys Phe Ser Cys Ser Asn Gly  
1 5

<210> 10526  
<211> 14  
<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10526

Asn Cys Pro Arg Ala Ile Ala Ala Arg Gln Ile Glu Pro Ala  
1 5 10

<210> 10527

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10527

Glu Gln Ser Phe Trp  
1 5

<210> 10528

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10528

Arg Pro Thr Thr Thr Arg Pro Asn Cys His  
1 5 10

<210> 10529

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10529

Glu Ile Cys Cys  
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<210> 10530

<211> 40

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10530

Lys Ala Ser Pro Lys Thr Tyr Cys His Lys Thr Val Gln Arg His Ser  
1 5 10 15

Ser Ile Trp Glu Thr Trp Ser Arg Thr Asn Pro Arg Lys Phe Arg Gly  
20 25 30

Pro Arg Pro Asn Gln Thr Arg Asn  
35 40

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<210> 10531  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10531  
 Leu Gln Thr Leu Gly Arg Lys Leu His Asn Leu Pro  
 1 5 10

<210> 10532  
 <211> 19  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10532  
 Gly Phe Tyr Leu Pro Arg Lys Ser Gln Pro Thr Ser Ile Ser Cys Arg  
 1 5 10 15

Ser Val Leu

<210> 10533  
 <211> 314  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> SARS coronavirus

<400> 10533  
 Thr Asn Lys Leu Lys Cys Leu Ile Met Asp Pro Asn Gln Thr Asn Val  
 1 5 10 15

Val Pro Pro Ala Leu His Leu Val Asp Pro Gln Ile Gln Leu Thr Ile  
 20 25 30

Thr Arg Met Glu Asp Cys Asn Gly Ala Arg Pro Lys Gln Arg Arg Pro  
 35 40 45

Gln Gly Leu Pro Asn Asn Ile Ala Ser Trp Phe Thr Ala Leu Thr Gln  
 50 55 60

His Gly Lys Glu Glu Leu Arg Phe Pro Arg Gly Gln Gly Val Pro Ile  
 65 70 75 80

Asn Thr Asn Ser Gly Pro Asp Asp Gln Ile Gly Tyr Tyr Arg Arg Ala  
 85 90 95

Thr Arg Arg Val Arg Gly Gly Asp Gly Lys Met Lys Glu Leu Ser Pro  
 100 105 110

Arg Trp Tyr Phe Tyr Tyr Leu Gly Thr Gly Pro Glu Ala Ser Leu Pro  
 115 120 125

Tyr Gly Ala Asn Lys Glu Gly Ile Val Trp Val Ala Thr Glu Gly Ala  
 130 135 140



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Leu Asn Thr Pro Lys Asp His Ile Gly Thr Arg Asn Pro Asn Asn Asn  
 145 150 155 160  
 Ala Ala Thr Val Leu Gln Leu Pro Gln Gly Thr Thr Leu Pro Lys Gly  
 165 170 175  
 Phe Tyr Ala Glu Gly Ser Arg Gly Gly Ser Gln Ala Ser Ser Arg Ser  
 180 185 190  
 Ser Ser Arg Ser Arg Gly Asn Ser Arg Asn Ser Thr Pro Gly Ser Ser  
 195 200 205  
 Arg Gly Asn Ser Pro Ala Arg Met Ala Ser Gly Gly Gly Glu Thr Ala  
 210 215 220  
 Leu Ala Leu Leu Leu Leu Asp Arg Leu Asn Gln Leu Glu Ser Lys Val  
 225 230 235 240  
 Ser Gly Lys Gly Gln Gln Gln Gln Gly Gln Thr Val Thr Lys Lys Ser  
 245 250 255  
 Ala Ala Glu Ala Ser Lys Lys Pro Arg Gln Lys Arg Thr Ala Thr Lys  
 260 265 270  
 Gln Tyr Asn Val Thr Gln Ala Phe Gly Arg Arg Gly Pro Glu Gln Thr  
 275 280 285  
 Gln Gly Asn Phe Gly Asp Gln Asp Leu Ile Arg Gln Gly Thr Asp Tyr  
 290 295 300  
 Lys His Trp Ala Ala Asn Cys Thr Ile Cys  
 305 310

<210> 10534  
 <211> 11  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10534  
 Arg Gln Ile Val Gln Phe Ala Ala Gln Cys Leu  
 1 5 10

<210> 10535  
 <211> 25  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10535  
 Ser Val Pro Cys Leu Ile Arg Ser Trp Ser Pro Lys Phe Pro Trp Val  
 1 5 10 15

Cys Ser Gly Pro Arg Leu Pro Asn Ala  
 20 25

<210> 10536  
 <211> 90  
 <212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10536

Val Thr Leu Tyr Cys Phe Val Ala Val Arg Phe Trp Arg Gly Phe Leu  
1 5 10 15  
Asp Ala Ser Ala Ala Asp Phe Leu Val Thr Val Trp Pro Cys Cys Cys  
20 25 30  
Trp Pro Leu Pro Glu Thr Leu Leu Ser Ser Trp Phe Asn Leu Ser Ser  
35 40 45  
Ser Asn Ser Ala Arg Ala Val Ser Pro Pro Pro Leu Ala Ile Arg Ala  
50 55 60  
Gly Glu Phe Pro Leu Leu Leu Pro Gly Val Glu Phe Leu Glu Leu Pro  
65 70 75 80  
Arg Leu Arg Asp Glu Glu Arg Glu Glu Ala  
85 90

<210> 10537

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10537

Leu Pro Pro Leu Leu Pro Ser Ala  
1 5

<210> 10538

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10538

Lys Pro Phe Gly Asn Val Val Pro  
1 5

<210> 10539

<211> 39

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10539

Gly Ser Cys Ser Thr Val Ala Ala Leu Leu Leu Gly Leu Arg Val Pro  
1 5 10 15  
Met Trp Ser Leu Gly Val Phe Lys Ala Pro Ser Val Ala Thr His Thr  
20 25 30

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Met Pro Ser Leu Leu Ala Pro  
35

<210> 10540  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10540  
Gly Ser Glu Ala Ser Gly Pro Val Pro Arg  
1 5 10

<210> 10541  
<211> 23  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10541  
Lys Tyr His Leu Gly Leu Ser Ser Phe Ile Leu Pro Ser Pro Pro Arg  
1 5 10 15

Thr Arg Arg Val Ala Leu Arg  
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<210> 10542  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10542  
Pro Ile Trp Ser Ser Gly Pro Leu Leu Val Leu Ile Gly Thr Pro Trp  
1 5 10 15

Pro Arg Gly Asn Leu Ser Ser Ser Leu Pro Cys  
20 25

<210> 10543  
<211> 34  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10543  
Val Arg Ala Val Asn Gln Asp Ala Ile Leu Leu Gly Lys Pro Trp Gly  
1 5 10 15

Arg Arg Cys Phe Gly Leu Ala Pro Leu Gln Ser Ser Ile Leu Val Ile  
20 25 30

Val Ser

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<210> 10544  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10544  
 Ile Cys Gly Ser Thr Lys Cys Asn Ala Gly Gly Thr Thr Leu Val  
 1 5 10 15

<210> 10545  
 <211> 12  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10545  
 Leu Gly Ser Ile Ile Arg His Phe Asn Leu Phe Val  
 1 5 10

<210> 10546  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10546  
 Arg Thr Asp Leu Gln Glu Ile Glu Val Gly Trp Leu Phe Leu Gly Arg  
 1 5 10 15

<210> 10547  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10547  
 Gly Lys Leu Cys Asn Leu Arg Pro Asn Val Cys Asn Gln Phe Leu Val  
 1 5 10 15

<210> 10548  
 <211> 21  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 10548  
 Leu Gly Leu Gly Pro Arg Asn Phe Leu Gly Phe Val Leu Asp His Val  
 1 5 10 15

Ser Gln Met Leu Glu

20

<210> 10549  
<211> 14  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10549  
Arg Cys Thr Val Leu Trp Gln Tyr Val Phe Gly Glu Ala Phe  
1 5 10

<210> 10550  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10550  
Met Pro Gln Gln Gln Ile Ser  
1 5

<210> 10551  
<211> 34  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10551  
Gln Phe Gly Leu Val Val Val Gly Leu Tyr Gln Lys Leu Cys Ser Gln  
1 5 10 15  
Ala Gly Ser Ile Cys Leu Ala Ala Ile Ala Arg Gly Gln Phe His His  
20 25 30

Leu Arg

<210> 10552  
<211> 59  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10552  
Pro Phe Glu Gln Glu Asn Phe Pro Tyr Cys Cys Gln Glu Leu Asn Phe  
1 5 10 15

Leu Asn Tyr Arg Asp Tyr Val Met Arg Ser Glu Lys Arg Leu Asp Cys  
20 25 30

Arg Leu Cys Phe Pro Leu Arg Arg Ser Leu Leu Ala Met Leu Phe Leu  
35 40 45

Glu Glu Val Val Ala Arg Trp Gln His Cys Tyr

50

55

<210> 10553  
 <211> 25  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Inferred translation product  
  
 <400> 10553  
 Asp Cys Gly Cys Gln Cys Gly Leu Trp Val Tyr Ser Arg Leu Pro Gln  
 1 5 10 15  
 Leu Gln Pro Ile Arg Cys Leu Leu Cys  
 20 25

<210> 10554  
 <211> 20  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Inferred translation product  
  
 <400> 10554  
 Arg Arg Arg Glu Val Lys Leu Leu Gly Gln Phe Leu Gly Asn Arg Ser  
 1 5 10 15  
 Thr Ile Trp Gly  
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<210> 10555  
 <211> 13  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Inferred translation product  
  
 <400> 10555  
 Ala Leu Ser Phe Cys Arg His His His Glu Leu Val Gly  
 1 5 10

<210> 10556  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Inferred translation product  
  
 <400> 10556  
 Leu Phe Gly Ser Ser Gln Phe Gly His Leu Asp His Tyr Trp Cys  
 1 5 10 15

<210> 10557  
 <211> 9  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Inferred translation product

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<400> 10557  
Leu Glu Arg Pro Gly Leu Glu Gly Ile  
1 5

<210> 10558  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10558  
Val Pro Pro Cys His Ala Glu  
1 5

<210> 10559  
<211> 79  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10559  
Thr Lys Thr Gln Tyr Tyr Trp Val Asn Leu Gly Val Gly Ala Val Leu  
1 5 10 15  
Ala Leu Pro His Cys Ser Pro Pro Phe Trp Leu Leu Ser Val Glu Ser  
20 25 30  
Val Gly Pro Pro Asn Val Met Arg Gly Ala Leu Arg Trp Phe Asp Trp  
35 40 45  
Gly Pro Leu Ser Asp Ile Leu Ile Cys Ser Phe Arg Glu Gln Ile Tyr  
50 55 60  
Lys Arg Ser Arg Leu Val Gly Phe Ser Trp Val Gly Lys Asn Leu  
65 70 75

<210> 10560  
<211> 17  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10560  
Ala Asn Cys Ala Ile Cys Gly Pro Met Phe Val Ile Ser Ser Leu Ser  
1 5 10 15

Asp

<210> 10561  
<211> 66  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

SEQLIST-20480.TXT

<400> 10561  
Val Leu Val Pro Glu Ile Ser Leu Gly Leu Phe Trp Thr Thr Ser Pro  
1 5 10 15  
Lys Cys Leu Ser Asp Val Val Leu Phe Cys Gly Ser Thr Phe Leu Ala  
20 25 30  
Arg Leu Phe Arg Cys Leu Ser Ser Arg Phe Leu Ser Asp Ser Leu Ala  
35 40 45  
Leu Leu Leu Leu Ala Phe Thr Arg Asn Phe Ala Leu Lys Leu Val Gln  
50 55 60  
Ser Val  
65

<210> 10562  
<211> 23  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10562  
Arg Glu Gly Ser Phe Thr Thr Ser Ala Ser His Ser Ser Arg Arg Ile  
1 5 10 15  
Ser Pro Thr Ala Ala Arg Ser  
20

<210> 10563  
<211> 5  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10563  
Ile Thr Ala Thr Thr  
1 5

<210> 10564  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10564  
Gly Ala Arg Arg Gly Leu Thr Ala Ala Ser Ala Ser Leu Cys Val Glu  
1 5 10 15  
Ala Phe Trp Gln Cys Cys Ser Leu Arg Lys Leu  
20 25

<210> 10565  
<211> 38  
<212> PRT  
<213> Artificial Sequence



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<220>

<223> Inferred translation product

<400> 10565

His Gly Gly Ser Ile Val Ile Arg Ile Ala Gly Ala Asn Val Val Phe  
1 5 10 15

Gly Cys Ile Gln Gly Ser Leu Ser Cys Asn Pro Tyr Asp Ala Phe Phe  
20 25 30

Val Ser Ala Val Gly Lys  
35

<210> 10566

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10566

Ser Phe Trp Ala Ser Ser  
1 5

<210> 10567

<211> 67

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10567

Val Ile Glu Val Pro Ser Gly Ala Glu Leu Phe His Phe Ala Val Thr  
1 5 10 15

Thr Thr Asn Ser Ser Gly Ser Ser Ser Val Val Ala Asn Leu Val Ile  
20 25 30

Trp Thr Thr Ile Gly Val Asp Trp Asn Ala Leu Ala Ser Arg Glu Ser  
35 40 45

Lys Phe Leu Leu Ala Met Leu Ser Glu Ser Cys Glu Pro Arg Arg Asn  
50 55 60

Ile Ile Gly  
65

<210> 10568

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 10568

Thr Leu Gly Ser Ala Leu Phe Trp Pro Cys Pro Ile Ala Val Leu His  
1 5 10 15

Ser Gly Tyr Cys Gln Leu Asn Leu Trp Val His Gln Met

20

25

<210> 10569  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10569  
Cys Gly Gly His Tyr Val Gly Leu Ile Gly Val His Tyr Gln Thr Phe  
1 5 10 15

<210> 10570  
<211> 19  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 10570  
Phe Val Arg Leu Glu Asn Arg Ser Thr Arg Asp Arg Gly Trp Leu Ala  
1 5 10 15

Phe Pro Gly

<210> 10571  
<211> 307  
<212> PRT  
<213> SARS coronavirus

<400> 10571  
Met Asp Pro Asn Gln Thr Asn Val Val Pro Pro Ala Leu His Leu Val  
1 5 10 15

Asp Pro Gln Ile Gln Leu Thr Ile Thr Arg Met Glu Asp Cys Asn Gly  
20 25 30

Ala Arg Pro Lys Gln Arg Arg Pro Gln Gly Leu Pro Asn Asn Ile Ala  
35 40 45

Ser Trp Phe Thr Ala Leu Thr Gln His Gly Lys Glu Glu Leu Arg Phe  
50 55 60

Pro Arg Gly Gln Gly Val Pro Ile Asn Thr Asn Ser Gly Pro Asp Asp  
65 70 75 80

Gln Ile Gly Tyr Tyr Arg Arg Ala Thr Arg Arg Val Arg Gly Gly Asp  
85 90 95

Gly Lys Met Lys Glu Leu Ser Pro Arg Trp Tyr Phe Tyr Tyr Leu Gly  
100 105 110

Thr Gly Pro Glu Ala Ser Leu Pro Tyr Gly Ala Asn Lys Glu Gly Ile  
115 120 125

Val Trp Val Ala Thr Glu Gly Ala Leu Asn Thr Pro Lys Asp His Ile  
130 135 140

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Gly Thr Arg Asn Pro Asn Asn Asn Ala Ala Thr Val Leu Gln Leu Pro  
145 150 155 160  
Gln Gly Thr Thr Leu Pro Lys Gly Phe Tyr Ala Glu Gly Ser Arg Gly  
165 170 175  
Gly Ser Gln Ala Ser Ser Arg Ser Ser Ser Arg Ser Arg Gly Asn Ser  
180 185 190  
Arg Asn Ser Thr Pro Gly Ser Ser Arg Gly Asn Ser Pro Ala Arg Met  
195 200 205  
Ala Ser Gly Gly Gly Glu Thr Ala Leu Ala Leu Leu Leu Leu Asp Arg  
210 215 220  
Leu Asn Gln Leu Glu Ser Lys Val Ser Gly Lys Gly Gln Gln Gln Gln  
225 230 235 240  
Gly Gln Thr Val Thr Lys Lys Ser Ala Ala Glu Ala Ser Lys Lys Pro  
245 250 255  
Arg Gln Lys Arg Thr Ala Thr Lys Gln Tyr Asn Val Thr Gln Ala Phe  
260 265 270  
Gly Arg Arg Gly Pro Glu Gln Thr Gln Gly Asn Phe Gly Asp Gln Asp  
275 280 285  
Leu Ile Arg Gln Gly Thr Asp Tyr Lys His Trp Ala Ala Asn Cys Thr  
290 295 300  
Ile Cys Leu  
305

<210> 10572  
<211> 281  
<212> PRT  
<213> SARS coronavirus

<400> 10572

Met Glu Asp Cys Asn Gly Ala Arg Pro Lys Gln Arg Arg Pro Gln Gly  
1 5 10 15  
Leu Pro Asn Asn Ile Ala Ser Trp Phe Thr Ala Leu Thr Gln His Gly  
20 25 30  
Lys Glu Glu Leu Arg Phe Pro Arg Gly Gln Gly Val Pro Ile Asn Thr  
35 40 45  
Asn Ser Gly Pro Asp Asp Gln Ile Gly Tyr Tyr Arg Arg Ala Thr Arg  
50 55 60  
Arg Val Arg Gly Gly Asp Gly Lys Met Lys Glu Leu Ser Pro Arg Trp  
65 70 75 80  
Tyr Phe Tyr Tyr Leu Gly Thr Gly Pro Glu Ala Ser Leu Pro Tyr Gly  
85 90 95  
Ala Asn Lys Glu Gly Ile Val Trp Val Ala Thr Glu Gly Ala Leu Asn  
100 105 110  
Thr Pro Lys Asp His Ile Gly Thr Arg Asn Pro Asn Asn Asn Ala Ala  
115 120 125

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Arg Ser Arg Gly Asn Ser Arg Asn Ser Thr Pro Gly Ser Ser Arg Gly  
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Asn Ser Pro Ala Arg Met Ala Ser Gly Gly Gly Glu Thr Ala Leu Ala  
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Leu Leu Leu Leu Asp Arg Leu Asn Gln Leu Glu Ser Lys Val Ser Gly  
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Lys Gly Gln Gln Gln Gln Gly Gln Thr Val Thr Lys Lys Ser Ala Ala  
210 215 220

Glu Ala Ser Lys Lys Pro Arg Gln Lys Arg Thr Ala Thr Lys Gln Tyr  
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Asn Val Thr Gln Ala Phe Gly Arg Arg Gly Pro Glu Gln Thr Gln Gly  
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Gly Gly Gly Glu Thr Ala Leu Ala Leu Leu Leu Leu Asp Arg Leu Asn  
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Gln Leu Glu Ser Lys Val Ser Gly Lys Gly Gln Gln Gln Gln Gly Gln  
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 caggtgacga gtttaaacad cttataccac tcatgtataa aggcctgccc tggaaatgtag 360  
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 Arg His Val Arg Ala Trp Ile Gly Phe Asp Val Glu Gly Cys His Ala  
 35 40 45  
 Thr Arg Asp Ala Val Gly Thr Asn Leu Pro Leu Gln Leu Gly Phe Ser  
 50 55 60  
 Thr Gly Val Asn Leu Val Ala Val Pro Thr Gly Tyr Val Asp Thr Glu  
 65 70 75 80  
 Asn Asn Thr Glu Phe Thr Arg Val Asn Ala Lys Pro Pro Pro Gly Asp  
 85 90 95

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Gln Phe Lys His Leu Ile Pro Leu Met Tyr Lys Gly Leu Pro Trp Asn  
100 105 110  
Val Val Arg Ile Lys Ile Val Gln Met Leu Ser Asp Thr Leu Lys Gly  
115 120 125  
Leu Ser Asp Arg Val Val Phe Val Leu Trp Ala His Gly Phe Glu Leu  
130 135 140  
Thr Ser Met Lys Tyr Phe Val Lys Ile Gly Pro Glu Arg Thr Cys Cys  
145 150 155 160  
Leu Cys Asp Lys Arg Ala Thr Cys Phe Ser Thr Ser Ser Asp Thr Tyr  
165 170 175  
Ala Cys Trp Asn His Ser Val Gly Phe Asp Tyr Val Tyr Asn Pro Phe  
180 185 190  
Met Ile Asp Val Gln Gln Trp Gly Phe Thr Gly Asn Leu Gln Ser Asn  
195 200 205  
His Asp Gln His Cys Gln Val His Gly Asn Ala His Val Ala Ser Cys  
210 215 220  
Asp Ala Ile Met Thr Arg Cys Leu Ala Val His Glu Cys Phe Val Lys  
225 230 235 240  
Arg Val Asp Trp Ser Val Glu Tyr Pro Ile Ile Gly Asp Glu Leu Arg  
245 250 255  
Val Asn Ser Ala Cys Arg Lys Val Gln His Met Val Val Lys Ser Ala  
260 265 270  
Leu Leu Ala Asp Lys Phe Pro Val Leu His Asp Ile Gly Asn Pro Lys  
275 280 285  
Ala Ile Lys Cys Val Pro Gln Ala Glu Val Glu Trp Lys Phe Tyr Asp  
290 295 300  
Ala Gln Pro Cys Ser Asp Lys Ala Tyr Lys Ile Glu Glu Leu Phe Tyr  
305 310 315 320  
Ser Tyr Ala Ile His His Asp Lys Phe Thr Asp Gly Val Cys Leu Phe  
325 330 335  
Trp Asn Cys Asn Val Asp Arg Tyr Pro Ala Asn Ala Ile Val Cys Arg  
340 345 350  
Phe Asp Thr Arg Val Leu Ser Asn Leu Asn Leu Pro Gly Cys Asp Gly  
355 360 365  
Gly Ser Leu Tyr Val Asn Lys His Ala Phe His Thr Pro Ala Phe Asp  
370 375 380  
Lys Ser Ala Phe Thr Asn Leu Lys Gln Leu Pro Phe Phe Tyr Tyr Ser  
385 390 395 400  
Asp Ser Pro Cys Glu Ser His Gly Lys Gln Val Val Ser Asp Ile Asp  
405 410 415  
Tyr Val Pro Leu Lys Ser Ala Thr Cys Ile Thr Arg Cys Asn Leu Gly  
420 425 430

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Gly Ala Val Cys Arg His His Ala Asn Glu Tyr Arg Gln Tyr Leu Asp  
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465 470 475 480  
Leu Glu Asn Val Ala Tyr Asn Val Val Asn Lys Gly His Phe Asp Gly  
485 490 495  
His Ala Gly Glu Ala Pro Val Ser Ile Ile Asn Asn Ala Val Tyr Thr  
500 505 510  
Lys Val Asp Gly Ile Asp Val Glu Ile Phe Glu Asn Lys Thr Thr Leu  
515 520 525  
Pro Val Asn Val Ala Phe Glu Leu Trp Ala Lys Arg Asn Ile Lys Pro  
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Val Pro Glu Ile Lys Ile Leu Asn Asn Leu Gly Val Asp Ile Ala Ala  
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565 570 575  
Thr Ile Gly Val Cys Thr Met Thr Asp Ile Ala Lys Lys Pro Thr Glu  
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Arg His Val Arg Ala Trp Ile Gly Phe Asp Val Glu Gly Cys His Ala  
35 40 45  
Thr Arg Asp Ala Val Gly Thr Asn Leu Pro Leu Gln Leu Gly Phe Ser  
50 55 60  
Thr Gly Val Asn Leu Val Ala Val Pro Thr Gly Tyr Val Asp Thr Glu  
65 70 75 80  
Asn Asn Thr Glu Phe Thr Arg Val Asn Ala Lys Pro Pro Pro Gly Asp  
85 90 95  
Gln Phe Lys His Leu Ile Pro Leu Met Tyr Lys Gly Leu Pro Trp Asn  
100 105 110  
Val Val Arg Ile Lys Ile Val Gln Met Leu Ser Asp Thr Leu Lys Gly  
115 120 125  
Leu Ser Asp Arg Val Val Phe Val Leu Trp Ala His Gly Phe Glu Leu  
130 135 140  
Thr Ser Met Lys Tyr Phe Val Lys Ile Gly Pro Glu Arg Thr Cys Cys  
145 150 155 160  
Leu Cys Asp Lys Arg Ala Thr Cys Phe Ser Thr Ser Ser Asp Thr Tyr  
165 170 175  
Ala Cys Trp Asn His Ser Val Gly Phe Asp Tyr Val Tyr Asn Pro Phe  
180 185 190  
Met Ile Asp Val Gln Gln Trp Gly Phe Thr Gly Asn Leu Gln Ser Asn  
195 200 205  
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Arg Asn

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 tatgcagttg catatgcact gtagtacagc gctgtgcatc taataaacct catgtgcttg 240  
 aagatccttg taaggtaaa cactaggggt aatacttata gcactgcttg gctttgtgtg 300  
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 gttactatca actgtcaaga tccagctggg gggtgcgctta tagctagggtg ttggtacctt 420  
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Leu Gly Lys Val Leu Pro Phe His Arg Trp His Thr Met Val Gln Thr  
35 40 45

Cys Thr Pro Asn Val Thr Ile Asn Cys Gln Asp Pro Ala Gly Gly Ala  
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<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 11572  
Trp Thr Pro Ile Lys Pro Thr  
1 5

<210> 11573  
<211> 13  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product



SEQLIST-20480.TXT

<400> 11573  
Cys Pro Pro His Tyr Ile Trp Trp Thr His Arg Phe Asn  
1 5 10

<210> 11574  
<211> 20  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 11574  
Pro Glu Trp Arg Thr Gln Trp Gly Lys Ala Lys Thr Ala Pro Thr Pro  
1 5 10 15

Arg Phe Thr Gln  
20

<210> 11575  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 11575  
Tyr Cys Val Leu Val His Ser Ser His Ser Ala Trp Gln Gly Gly Thr  
1 5 10 15

<210> 11576  
<211> 12  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 11576  
Ile Pro Ser Arg Pro Gly Arg Ser Asn Gln His Gln  
1 5 10

<210> 11577  
<211> 15  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 11577  
Pro Asn Trp Leu Leu Pro Lys Ser Tyr Pro Thr Ser Ser Trp Trp  
1 5 10 15

<210> 11578  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

SEQLIST-20480.TXT

<400> 11578  
Arg Gln Asn Glu Arg Ala Gln Pro Gln Met Val Leu Leu Leu Pro Arg  
1 5 10 15

Asn Trp Pro Arg Ser Phe Thr Ser Leu Arg Arg  
20 25

<210> 11579  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 11579  
Gln Arg Arg His Arg Met Gly Cys Asn  
1 5

<210> 11580  
<211> 15  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 11580  
Gly Ser Leu Glu Tyr Thr Gln Arg Pro His Trp His Pro Gln Ser  
1 5 10 15

<210> 11581  
<211> 36  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 11581  
Gln Cys Cys His Arg Ala Thr Thr Ser Ser Arg Asn Asn Ile Ala Lys  
1 5 10 15

Arg Leu Leu Arg Arg Gly Lys Gln Arg Arg Gln Ser Ser Leu Phe Ser  
20 25 30

Leu Leu Ile Thr  
35

<210> 11582  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 11582  
Phe Lys Lys Phe Asn Ser Trp Gln Gln  
1 5

<210> 11583

<211> 8  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 11583  
 Gly Lys Phe Ser Cys Ser Asn Gly  
 1 5

<210> 11584  
 <211> 14  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 11584  
 Asn Cys Pro Arg Ala Ile Ala Ala Arg Gln Ile Glu Pro Ala  
 1 5 10

<210> 11585  
 <211> 5  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 11585  
 Glu Gln Ser Phe Trp  
 1 5

<210> 11586  
 <211> 10  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 11586  
 Arg Pro Thr Thr Thr Arg Pro Asn Cys His  
 1 5 10

<210> 11587  
 <211> 4  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 11587  
 Glu Ile Cys Cys  
 1

<210> 11588  
 <211> 40  
 <212> PRT  
 <213> Artificial Sequence

SEQLIST-20480.TXT

<220>  
 <223> Inferred translation product  
 <400> 11588  
 Lys Ala Ser Pro Lys Thr Tyr Cys His Lys Thr Val Gln Arg His Ser  
 1 5 10 15  
 Ser Ile Trp Glu Thr Trp Ser Arg Thr Asn Pro Arg Lys Phe Arg Gly  
 20 25 30  
 Pro Arg Pro Asn Gln Thr Arg Asn  
 35 40

<210> 11589  
 <211> 40  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product  
 <400> 11589  
 Leu Gln Thr Leu Ala Ala Asn Cys Thr Ile Cys Ser Lys Cys Leu Cys  
 1 5 10 15  
 Ile Leu Trp Asn Val Thr His Trp His Gly Ser His Thr Phe Gly Asn  
 20 25 30  
 Met Ala Asp Leu Ser Trp Ser His  
 35 40

<210> 11590  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product  
 <400> 11590  
 Gln Arg Ser Thr Ile Gln Arg Gln Arg His Thr Ala Glu Gln Ala His  
 1 5 10 15

<210> 11591  
 <211> 10  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product  
 <400> 11591  
 Arg Ile Gln Asn Ile Pro Thr Asn Arg Ala  
 1 5 10

<210> 11592  
 <211> 7  
 <212> PRT  
 <213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 11592  
Lys Gly Gln Lys Glu Lys Asp  
1 5

<210> 11593  
<211> 19  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 11593  
Ser Ser Ala Phe Ala Ala Glu Thr Lys Glu Ala Ala His Cys Asp Ser  
1 5 10 15

Ser Ser Cys

<210> 11594  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 11594  
Glu Asp Ser Ser Ser Ser Phe Asn  
1 5

<210> 11595  
<211> 64  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 11595  
Leu Leu Phe Val Leu Phe Ser Leu Ser Ala Ile Pro Cys Phe Asn Asn  
1 5 10 15

Ala Tyr Tyr Ile Leu Val Phe Thr Arg Asn Pro Gly Ser Arg Arg Thr  
20 25 30

Leu Tyr Gln Ser Leu Asn Glu His Glu Thr Ser His Cys Phe Asp Leu  
35 40 45

Tyr Phe Ser Met Gln Leu His Met His Cys Ser Thr Ala Leu Cys Ile  
50 55 60

<210> 11596  
<211> 4  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

SEQLIST-20480.TXT

<400> 11596  
Thr Ser Cys Ala  
1

<210> 11597  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 11597  
Gly Thr Thr Leu Gly Val Ile Leu Ile Ala Leu Leu Gly Phe Val Leu  
1 5 10 15

<210> 11598  
<211> 32  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 11598  
Glu Arg Phe Tyr Leu Phe Ile Asp Gly Thr Leu Trp Phe Lys His Ala  
1 5 10 15  
His Leu Met Leu Leu Ser Thr Val Lys Ile Gln Leu Val Val Arg Leu  
20 25 30

<210> 11599  
<211> 21  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 11599  
Leu Gly Val Gly Thr Phe Met Lys Val Thr Lys Leu Leu His Leu Glu  
1 5 10 15  
Thr Tyr Leu Leu Phe  
20

<210> 11600  
<211> 403  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 11600  
Ile Asn Glu Gln Ile Lys Met Ser Asp Asn Gly Pro Gln Ser Asn Gln  
1 5 10 15  
Arg Ser Ala Pro Arg Ile Thr Phe Gly Gly Pro Thr Asp Ser Thr Asp  
20 25 30

SEQLIST-20480.TXT

Asn Asn Gln Asn Gly Gly Arg Asn Gly Ala Arg Pro Lys Gln Arg Arg  
 35 40 45  
 Pro Gln Gly Leu Pro Asn Asn Ile Ala Ser Trp Phe Thr Ala Leu Thr  
 50 55 60  
 Gln His Gly Lys Glu Glu Leu Arg Phe Pro Arg Gly Gln Gly Val Pro  
 65 70 75 80  
 Ile Asn Thr Asn Ser Gly Pro Asp Asp Gln Ile Gly Tyr Tyr Arg Arg  
 85 90 95  
 Ala Thr Arg Arg Val Arg Gly Gly Asp Gly Lys Met Lys Glu Leu Ser  
 100 105 110  
 Pro Arg Trp Tyr Phe Tyr Tyr Leu Gly Thr Gly Pro Glu Ala Ser Leu  
 115 120 125  
 Pro Tyr Gly Ala Asn Lys Glu Gly Ile Val Trp Val Ala Thr Glu Gly  
 130 135 140  
 Ala Leu Asn Thr Pro Lys Asp His Ile Gly Thr Arg Asn Pro Asn Asn  
 145 150 155 160  
 Asn Ala Ala Thr Val Leu Gln Leu Pro Gln Gly Thr Thr Leu Pro Lys  
 165 170 175  
 Gly Phe Tyr Ala Glu Gly Ser Arg Gly Gly Ser Gln Ala Ser Ser Arg  
 180 185 190  
 Ser Ser Ser Arg Ser Arg Gly Asn Ser Arg Asn Ser Thr Pro Gly Ser  
 195 200 205  
 Ser Arg Gly Asn Ser Pro Ala Arg Met Ala Ser Gly Gly Gly Glu Thr  
 210 215 220  
 Ala Leu Ala Leu Leu Leu Leu Asp Arg Leu Asn Gln Leu Glu Ser Lys  
 225 230 235 240  
 Val Ser Gly Lys Gly Gln Gln Gln Gln Gly Gln Thr Val Thr Lys Lys  
 245 250 255  
 Ser Ala Ala Glu Ala Ser Lys Lys Pro Arg Gln Lys Arg Thr Ala Thr  
 260 265 270  
 Lys Gln Tyr Asn Val Thr Gln Ala Phe Gly Arg Arg Gly Pro Glu Gln  
 275 280 285  
 Thr Gln Gly Asn Phe Gly Asp Gln Asp Leu Ile Arg Gln Gly Thr Asp  
 290 295 300  
 Tyr Lys His Trp Pro Gln Ile Ala Gln Phe Ala Pro Ser Ala Ser Ala  
 305 310 315 320  
 Phe Phe Gly Met Ser Arg Ile Gly Met Glu Val Thr Pro Ser Gly Thr  
 325 330 335  
 Trp Leu Thr Tyr His Gly Ala Ile Lys Leu Asp Asp Lys Asp Pro Gln  
 340 345 350  
 Phe Lys Asp Asn Val Ile Leu Leu Asn Lys His Ile Asp Ala Tyr Lys  
 355 360 365

SEQLIST-20480.TXT

Thr Phe Pro Pro Thr Glu Pro Lys Lys Asp Lys Lys Lys Lys Thr Asp  
370 375 380

Glu Ala Gln Pro Leu Pro Gln Arg Gln Lys Lys Gln Pro Thr Val Thr  
385 390 395 400

Leu Leu Pro

<210> 11601  
<211> 45  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 11601  
Arg Thr Arg Ala Gln Ala Leu Ile Asp Phe Tyr Leu Cys Phe Leu Ala  
1 5 10 15

Phe Leu Leu Phe Leu Val Leu Ile Met Leu Ile Ile Phe Trp Phe Ser  
20 25 30

Leu Glu Ile Gln Asp Leu Glu Glu Pro Cys Thr Lys Val  
35 40 45

<210> 11602  
<211> 41  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 11602  
Thr Asn Met Lys Leu Leu Ile Val Leu Thr Cys Ile Ser Leu Cys Ser  
1 5 10 15

Cys Ile Cys Thr Val Val Gln Arg Cys Ala Ser Asn Lys Pro His Val  
20 25 30

Leu Glu Asp Pro Cys Lys Val Gln His  
35 40

<210> 11603  
<211> 14  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 11603  
His Cys Leu Ala Leu Cys Ser Arg Lys Gly Phe Thr Phe Ser  
1 5 10

<210> 11604  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>



<223> Inferred translation product

<400> 11604  
Met Ala His Tyr Gly Ser Asn Met His Thr  
1 5 10

<210> 11605

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 11605  
Cys Tyr Tyr Gln Leu Ser Arg Ser Ser Trp Trp Cys Ala Tyr Ser  
1 5 10 15

<210> 11606

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 11606  
Val Leu Val Pro Ser  
1 5

<210> 11607

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 11607  
Arg Ser Pro Asn Cys Cys Ile  
1 5

<210> 11608

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 11608  
Arg Arg Thr Cys Cys Phe Lys  
1 5

<210> 11609

<211> 106

<212> PRT

<213> Artificial Sequence

<220>

<223> Inferred translation product

<400> 11609

SEQLIST-20480.TXT

Thr Asn Lys Leu Lys Cys Leu Ile Met Asp Pro Asn Gln Thr Asn Val  
 1 5 10 15  
 Val Pro Pro Ala Leu His Leu Val Asp Pro Gln Ile Gln Leu Thr Ile  
 20 25 30  
 Thr Arg Met Glu Asp Ala Met Gly Gln Gly Gln Asn Ser Ala Asp Pro  
 35 40 45  
 Lys Val Tyr Pro Ile Ile Leu Arg Leu Gly Ser Gln Leu Ser Leu Ser  
 50 55 60  
 Met Ala Arg Arg Asn Leu Asp Ser Leu Glu Ala Arg Ala Phe Gln Ser  
 65 70 75 80  
 Thr Pro Ile Val Val Gln Met Thr Lys Leu Ala Thr Thr Glu Glu Leu  
 85 90 95  
 Pro Asp Glu Phe Val Val Val Thr Ala Lys  
 100 105

<210> 11610  
 <211> 11  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 11610  
 Lys Ser Ser Ala Pro Asp Gly Thr Ser Ile Thr  
 1 5 10

<210> 11611  
 <211> 25  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 11611  
 Glu Leu Ala Gln Lys Leu His Phe Pro Thr Ala Leu Thr Lys Lys Ala  
 1 5 10 15  
 Ser Tyr Gly Leu Gln Leu Arg Glu Pro  
 20 25

<210> 11612  
 <211> 84  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 11612  
 Ile His Pro Lys Thr Thr Leu Ala Pro Ala Ile Leu Ile Thr Met Leu  
 1 5 10 15  
 Pro Pro Cys Tyr Asn Phe Leu Lys Glu Gln His Cys Gln Lys Ala Ser  
 20 25 30

SEQLIST-20480.TXT

Thr Gln Arg Glu Ala Glu Ala Ala Val Lys Pro Leu Leu Ala Pro His  
 35 40 45  
 His Val Val Ala Val Ile Gln Glu Ile Gln Leu Leu Ala Ala Val Gly  
 50 55 60  
 Glu Ile Leu Leu Leu Glu Trp Leu Ala Glu Val Val Lys Leu Pro Ser  
 65 70 75 80  
 Arg Tyr Cys Cys

<210> 11613  
 <211> 63  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 11613  
 Thr Ser Leu Arg Ala Lys Phe Leu Val Lys Ala Asn Asn Asn Lys Ala  
 1 5 10 15  
 Lys Leu Ser Leu Arg Asn Leu Leu Leu Arg His Leu Lys Ser Leu Ala  
 20 25 30  
 Lys Asn Val Leu Pro Gln Asn Ser Thr Thr Ser Leu Lys His Leu Gly  
 35 40 45  
 Asp Val Val Gln Asn Lys Pro Lys Glu Ile Ser Gly Thr Lys Thr  
 50 55 60

<210> 11614  
 <211> 39  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 11614  
 Ser Asp Lys Glu Leu Ile Thr Asn Ile Gly Arg Lys Leu His Asn Leu  
 1 5 10 15  
 Leu Gln Val Pro Leu His Ser Leu Glu Cys His Ala Leu Ala Trp Lys  
 20 25 30  
 Ser His Leu Arg Glu His Gly  
 35

<210> 11615  
 <211> 21  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Inferred translation product

<400> 11615  
 Leu Ile Met Glu Pro Leu Asn Trp Met Thr Lys Ile His Asn Ser Lys  
 1 5 10 15

SEQLIST-20480.TXT

Thr Thr Ser Tyr Cys  
20

<210> 11616  
<211> 38  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 11616  
Thr Ser Thr Leu Thr His Thr Lys His Ser His Gln Gln Ser Leu Lys  
1 5 10 15  
Arg Thr Lys Arg Lys Arg Leu Met Lys Leu Ser Leu Cys Arg Arg Asp  
20 25 30  
Lys Arg Ser Ser Pro Leu  
35

<210> 11617  
<211> 4  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Inferred translation product

<400> 11617  
Leu Phe Phe Leu  
1

<210> 11618  
<211> 397  
<212> PRT  
<213> SARS coronavirus

<400> 11618  
Met Ser Asp Asn Gly Pro Gln Ser Asn Gln Arg Ser Ala Pro Arg Ile  
1 5 10 15  
Thr Phe Gly Gly Pro Thr Asp Ser Thr Asp Asn Asn Gln Asn Gly Gly  
20 25 30  
Arg Asn Gly Ala Arg Pro Lys Gln Arg Arg Pro Gln Gly Leu Pro Asn  
35 40 45  
Asn Ile Ala Ser Trp Phe Thr Ala Leu Thr Gln His Gly Lys Glu Glu  
50 55 60  
Leu Arg Phe Pro Arg Gly Gln Gly Val Pro Ile Asn Thr Asn Ser Gly  
65 70 75 80  
Pro Asp Asp Gln Ile Gly Tyr Tyr Arg Arg Ala Thr Arg Arg Val Arg  
85 90 95  
Gly Gly Asp Gly Lys Met Lys Glu Leu Ser Pro Arg Trp Tyr Phe Tyr  
100 105 110  
Tyr Leu Gly Thr Gly Pro Glu Ala Ser Leu Pro Tyr Gly Ala Asn Lys  
115 120 125

SEQLIST-20480.TXT

Glu Gly Ile Val Trp Val Ala Thr Glu Gly Ala Leu Asn Thr Pro Lys  
 130 135 140  
 Asp His Ile Gly Thr Arg Asn Pro Asn Asn Asn Ala Ala Thr Val Leu  
 145 150 155 160  
 Gln Leu Pro Gln Gly Thr Thr Leu Pro Lys Gly Phe Tyr Ala Glu Gly  
 165 170 175  
 Ser Arg Gly Gly Ser Gln Ala Ser Ser Arg Ser Ser Ser Arg Ser Arg  
 180 185 190  
 Gly Asn Ser Arg Asn Ser Thr Pro Gly Ser Ser Arg Gly Asn Ser Pro  
 195 200 205  
 Ala Arg Met Ala Ser Gly Gly Gly Glu Thr Ala Leu Ala Leu Leu Leu  
 210 215 220  
 Leu Asp Arg Leu Asn Gln Leu Glu Ser Lys Val Ser Gly Lys Gly Gln  
 225 230 235 240  
 Gln Gln Gln Gly Gln Thr Val Thr Lys Lys Ser Ala Ala Glu Ala Ser  
 245 250 255  
 Lys Lys Pro Arg Gln Lys Arg Thr Ala Thr Lys Gln Tyr Asn Val Thr  
 260 265 270  
 Gln Ala Phe Gly Arg Arg Gly Pro Glu Gln Thr Gln Gly Asn Phe Gly  
 275 280 285  
 Asp Gln Asp Leu Ile Arg Gln Gly Thr Asp Tyr Lys His Trp Pro Gln  
 290 295 300  
 Ile Ala Gln Phe Ala Pro Ser Ala Ser Ala Phe Phe Gly Met Ser Arg  
 305 310 315 320  
 Ile Gly Met Glu Val Thr Pro Ser Gly Thr Trp Leu Thr Tyr His Gly  
 325 330 335  
 Ala Ile Lys Leu Asp Asp Lys Asp Pro Gln Phe Lys Asp Asn Val Ile  
 340 345 350  
 Leu Leu Asn Lys His Ile Asp Ala Tyr Lys Thr Phe Pro Pro Thr Glu  
 355 360 365  
 Pro Lys Lys Asp Lys Lys Lys Lys Thr Asp Glu Ala Gln Pro Leu Pro  
 370 375 380  
 Gln Arg Gln Lys Lys Gln Pro Thr Val Thr Leu Leu Pro  
 385 390 395  
 <210> 11619  
 <211> 98  
 <212> PRT  
 <213> SARS coronavirus  
 <400> 11619  
 Met Asp Pro Asn Gln Thr Asn Val Val Pro Pro Ala Leu His Leu Val  
 1 5 10 15  
 Asp Pro Gln Ile Gln Leu Thr Ile Thr Arg Met Glu Asp Ala Met Gly  
 20 25 30

SEQLIST-20480.TXT

Gln Gly Gln Asn Ser Ala Asp Pro Lys Val Tyr Pro Ile Ile Leu Arg  
 35 40 45  
 Leu Gly Ser Gln Leu Ser Leu Ser Met Ala Arg Arg Asn Leu Asp Ser  
 50 55 60  
 Leu Glu Ala Arg Ala Phe Gln Ser Thr Pro Ile Val Val Gln Met Thr  
 65 70 75 80  
 Lys Leu Ala Thr Thr Glu Glu Leu Pro Asp Glu Phe Val Val Val Thr  
 85 90 95

Ala Lys

<210> 11620  
 <211> 1125  
 <212> PRT  
 <213> SARS coronavirus

<400> 11620  
 Lys Asp Met Thr Tyr Arg Arg Leu Ile Ser Met Met Gly Phe Lys Met  
 1 5 10 15  
 Asn Tyr Gln Val Asn Gly Tyr Pro Asn Met Phe Ile Thr Arg Glu Glu  
 20 25 30  
 Ala Ile Arg His Val Arg Ala Trp Ile Gly Phe Asp Val Glu Gly Cys  
 35 40 45  
 His Ala Thr Arg Asp Ala Val Gly Thr Asn Leu Pro Leu Gln Leu Gly  
 50 55 60  
 Phe Ser Thr Gly Val Asn Leu Val Ala Val Pro Thr Gly Tyr Val Asp  
 65 70 75 80  
 Thr Glu Asn Asn Thr Glu Phe Thr Arg Val Asn Ala Lys Pro Pro Pro  
 85 90 95  
 Gly Asp Gln Phe Lys His Leu Ile Pro Leu Met Tyr Lys Gly Leu Pro  
 100 105 110  
 Trp Asn Val Val Arg Ile Lys Ile Val Gln Met Leu Ser Asp Thr Leu  
 115 120 125  
 Lys Gly Leu Ser Asp Arg Val Val Phe Val Leu Trp Ala His Gly Phe  
 130 135 140  
 Glu Leu Thr Ser Met Lys Tyr Phe Val Lys Ile Gly Pro Glu Arg Thr  
 145 150 155 160  
 Cys Cys Leu Cys Asp Lys Arg Ala Thr Cys Phe Ser Thr Ser Ser Asp  
 165 170 175  
 Thr Tyr Ala Cys Trp Asn His Ser Val Gly Phe Asp Tyr Val Tyr Asn  
 180 185 190  
 Pro Phe Met Ile Asp Val Gln Gln Trp Gly Phe Thr Gly Asn Leu Gln  
 195 200 205  
 Ser Asn His Asp Gln His Cys Gln Val His Gly Asn Ala His Val Ala  
 210 215 220

SEQLIST-20480.TXT

Ser Cys Asp Ala Ile Met Thr Arg Cys Leu Ala Val His Glu Cys Phe  
225 230 235 240  
Val Lys Arg Val Asp Trp Ser Val Glu Tyr Pro Ile Ile Gly Asp Glu  
245 250 255  
Leu Arg Val Asn Ser Ala Cys Arg Lys Val Gln His Met Val Val Lys  
260 265 270  
Ser Ala Leu Leu Ala Asp Lys Phe Pro Val Leu His Asp Ile Gly Asn  
275 280 285  
Pro Lys Ala Ile Lys Cys Val Pro Gln Ala Glu Val Glu Trp Lys Phe  
290 295 300  
Tyr Asp Ala Gln Pro Cys Ser Asp Lys Ala Tyr Lys Ile Glu Glu Leu  
305 310 315 320  
Phe Tyr Ser Tyr Ala Ile His His Asp Lys Phe Thr Asp Gly Val Cys  
325 330 335  
Leu Phe Trp Asn Cys Asn Val Asp Arg Tyr Pro Ala Asn Ala Ile Val  
340 345 350  
Cys Arg Phe Asp Thr Arg Val Leu Ser Asn Leu Asn Leu Pro Gly Cys  
355 360 365  
Asp Gly Gly Ser Leu Tyr Val Asn Lys His Ala Phe His Thr Pro Ala  
370 375 380  
Phe Asp Lys Ser Ala Phe Thr Asn Leu Lys Gln Leu Pro Phe Phe Tyr  
385 390 395 400  
Tyr Ser Asp Ser Pro Cys Glu Ser His Gly Lys Gln Val Val Ser Asp  
405 410 415  
Ile Asp Tyr Val Pro Leu Lys Ser Ala Thr Cys Ile Thr Arg Cys Asn  
420 425 430  
Leu Gly Gly Ala Val Cys Arg His His Ala Asn Glu Tyr Arg Gln Tyr  
435 440 445  
Leu Asp Ala Tyr Asn Met Met Ile Ser Ala Gly Phe Ser Leu Trp Ile  
450 455 460  
Tyr Lys Gln Phe Asp Thr Tyr Asn Leu Trp Asn Thr Phe Thr Arg Leu  
465 470 475 480  
Gln Ser Leu Glu Asn Val Ala Tyr Asn Val Val Asn Lys Gly His Phe  
485 490 495  
Asp Gly His Ala Gly Glu Ala Pro Val Ser Ile Ile Asn Asn Ala Val  
500 505 510  
Tyr Thr Lys Val Asp Gly Ile Asp Val Glu Ile Phe Glu Asn Lys Thr  
515 520 525  
Thr Leu Pro Val Asn Val Ala Phe Glu Leu Trp Ala Lys Arg Asn Ile  
530 535 540  
Lys Pro Val Pro Glu Ile Lys Ile Leu Asn Asn Leu Gly Val Asp Ile  
545 550 555 560

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Ala Ala Asn Thr Val Ile Trp Asp Tyr Lys Arg Glu Ala Pro Ala His  
565 570 575

Val Ser Thr Ile Gly Val Cys Thr Met Thr Asp Ile Ala Lys Lys Pro  
580 585 590

Thr Glu Ser Ala Cys Ser Ser Leu Thr Val Leu Phe Asp Gly Arg Val  
595 600 605

Glu Gly Gln Val Asp Leu Phe Arg Asn Ala Arg Asn Gly Val Leu Ile  
610 615 620

Thr Glu Gly Ser Val Lys Gly Leu Thr Pro Ser Lys Gly Pro Ala Gln  
625 630 635 640

Ala Ser Val Asn Gly Val Thr Leu Ile Gly Glu Ser Val Lys Thr Gln  
645 650 655

Phe Asn Tyr Phe Lys Lys Val Asp Gly Ile Ile Gln Gln Leu Pro Glu  
660 665 670

Thr Tyr Phe Thr Gln Ser Arg Asp Leu Glu Asp Phe Lys Pro Arg Ser  
675 680 685

Gln Met Glu Thr Asp Phe Leu Glu Leu Ala Met Asp Glu Phe Ile Gln  
690 695 700

Arg Tyr Lys Leu Glu Gly Tyr Ala Phe Glu His Ile Val Tyr Gly Asp  
705 710 715 720

Phe Ser His Gly Gln Leu Gly Gly Leu His Leu Met Ile Gly Leu Ala  
725 730 735

Lys Arg Ser Gln Asp Ser Pro Leu Lys Leu Glu Asp Phe Ile Pro Met  
740 745 750

Asp Ser Thr Val Lys Asn Tyr Phe Ile Thr Asp Ala Gln Thr Gly Ser  
755 760 765

Ser Lys Cys Val Cys Ser Val Ile Asp Leu Leu Leu Asp Asp Phe Val  
770 775 780

Glu Ile Ile Lys Ser Gln Asp Leu Ser Val Ile Ser Lys Val Val Lys  
785 790 795 800

Val Thr Ile Asp Tyr Ala Glu Ile Ser Phe Met Leu Trp Cys Lys Asp  
805 810 815

Gly His Val Glu Thr Phe Tyr Pro Lys Leu Gln Ala Ser Gln Ala Trp  
820 825 830

Gln Pro Gly Val Ala Met Pro Asn Leu Tyr Lys Met Gln Arg Met Leu  
835 840 845

Leu Glu Lys Cys Asp Leu Gln Asn Tyr Gly Glu Asn Ala Val Ile Pro  
850 855 860

Lys Gly Ile Met Met Asn Val Ala Lys Tyr Thr Gln Leu Cys Gln Tyr  
865 870 875 880

Leu Asn Thr Leu Thr Leu Ala Val Pro Tyr Asn Met Arg Val Ile His  
885 890 895



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Phe Gly Ala Gly Ser Asp Lys Gly Val Ala Pro Gly Thr Ala Val Leu  
900 905 910  
Arg Gln Trp Leu Pro Thr Gly Thr Leu Leu Val Asp Ser Asp Leu Asn  
915 920 925  
Asp Phe Val Ser Asp Ala Asp Ser Thr Leu Ile Gly Asp Cys Ala Thr  
930 935 940  
Val His Thr Ala Asn Lys Trp Asp Leu Ile Ile Ser Asp Met Tyr Asp  
945 950 955 960  
Pro Arg Thr Lys His Val Thr Lys Glu Asn Asp Ser Lys Glu Gly Phe  
965 970 975  
Phe Thr Tyr Leu Cys Gly Phe Ile Lys Gln Lys Leu Ala Leu Gly Gly  
980 985 990  
Ser Ile Ala Val Lys Ile Thr Glu His Ser Trp Asn Ala Asp Leu Tyr  
995 1000 1005  
Lys Leu Met Gly His Phe Ser Trp Trp Thr Ala Phe Val Thr Asn Val  
1010 1015 1020  
Asn Ala Ser Ser Ser Glu Ala Phe Leu Ile Gly Ala Asn Tyr Leu Gly  
1025 1030 1035 1040  
Lys Pro Lys Glu Gln Ile Asp Gly Tyr Thr Met His Ala Asn Tyr Ile  
1045 1050 1055  
Phe Trp Arg Asn Thr Asn Pro Ile Gln Leu Ser Ser Tyr Ser Leu Phe  
1060 1065 1070  
Asp Met Ser Lys Phe Pro Leu Lys Leu Arg Gly Thr Ala Val Met Ser  
1075 1080 1085  
Leu Lys Glu Asn Gln Ile Asn Asp Met Ile Tyr Ser Leu Leu Glu Lys  
1090 1095 1100  
Gly Arg Leu Ile Ile Arg Glu Asn Asn Arg Val Val Val Ser Ser Asp  
1105 1110 1115 1120  
Ile Leu Val Asn Asn  
1125

<210> 11621  
<211> 5  
<212> PRT  
<213> SARS coronavirus

<400> 11621  
Tyr Ala Ile His His  
1 5

<210> 11622  
<211> 5  
<212> PRT  
<213> SARS coronavirus

<400> 11622  
Tyr Ala Thr His His  
1 5

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<210> 11623  
 <211> 5  
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 <213> SARS coronavirus

<400> 11623  
 Ala Ser Gln Ala Trp  
 1 5

<210> 11624  
 <211> 5  
 <212> PRT  
 <213> SARS coronavirus

<400> 11624  
 Ala Ser Arg Ala Trp  
 1 5

<210> 11625  
 <211> 5  
 <212> PRT  
 <213> SARS coronavirus

<400> 11625  
 Asp Ala Asp Ser Thr  
 1 5

<210> 11626  
 <211> 5  
 <212> PRT  
 <213> SARS coronavirus

<400> 11626  
 Asp Ala Tyr Ser Thr  
 1 5

<210> 11627  
 <211> 1255  
 <212> PRT  
 <213> SARS coronavirus

<400> 11627  
 Met Phe Ile Phe Leu Leu Phe Leu Thr Leu Thr Ser Gly Ser Asp Leu  
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 Asp Arg Cys Thr Thr Phe Asp Asp Val Gln Ala Pro Asn Tyr Thr Gln  
 20 25 30  
 His Thr Ser Ser Met Arg Gly Val Tyr Tyr Pro Asp Glu Ile Phe Arg  
 35 40 45  
 Ser Asp Thr Leu Tyr Leu Thr Gln Asp Leu Phe Leu Pro Phe Tyr Ser  
 50 55 60  
 Asn Val Thr Gly Phe His Thr Ile Asn His Thr Phe Gly Asn Pro Val  
 65 70 75 80  
 Ile Pro Phe Lys Asp Gly Ile Tyr Phe Ala Ala Thr Glu Lys Ser Asn  
 85 90 95  
 Val Val Arg Gly Trp Val Phe Gly Ser Thr Met Asn Asn Lys Ser Gln  
 100 105 110

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Ser Val Ile Ile Ile Asn Asn Ser Thr Asn Val Val Ile Arg Ala Cys  
115 120 125

Asn Phe Glu Leu Cys Asp Asn Pro Phe Phe Ala Val Ser Lys Pro Met  
130 135 140

Gly Thr Gln Thr His Thr Met Ile Phe Asp Asn Ala Phe Asn Cys Thr  
145 150 155 160

Phe Glu Tyr Ile Ser Asp Ala Phe Ser Leu Asp Val Ser Glu Lys Ser  
165 170 175

Gly Asn Phe Lys His Leu Arg Glu Phe Val Phe Lys Asn Lys Asp Gly  
180 185 190

Phe Leu Tyr Val Tyr Lys Gly Tyr Gln Pro Ile Asp Val Val Arg Asp  
195 200 205

Leu Pro Ser Gly Phe Asn Thr Leu Lys Pro Ile Phe Lys Leu Pro Leu  
210 215 220

Gly Ile Asn Ile Thr Asn Phe Arg Ala Ile Leu Thr Ala Phe Ser Pro  
225 230 235 240

Ala Gln Asp Ile Trp Gly Thr Ser Ala Ala Tyr Phe Val Gly Tyr  
245 250 255

Leu Lys Pro Thr Thr Phe Met Leu Lys Tyr Asp Glu Asn Gly Thr Ile  
260 265 270

Thr Asp Ala Val Asp Cys Ser Gln Asn Pro Leu Ala Glu Leu Lys Cys  
275 280 285

Ser Val Lys Ser Phe Glu Ile Asp Lys Gly Ile Tyr Gln Thr Ser Asn  
290 295 300

Phe Arg Val Val Pro Ser Gly Asp Val Val Arg Phe Pro Asn Ile Thr  
305 310 315 320

Asn Leu Cys Pro Phe Gly Glu Val Phe Asn Ala Thr Lys Phe Pro Ser  
325 330 335

Val Tyr Ala Trp Glu Arg Lys Lys Ile Ser Asn Cys Val Ala Asp Tyr  
340 345 350

Ser Val Leu Tyr Asn Ser Thr Phe Phe Ser Thr Phe Lys Cys Tyr Gly  
355 360 365

Val Ser Ala Thr Lys Leu Asn Asp Leu Cys Phe Ser Asn Val Tyr Ala  
370 375 380

Asp Ser Phe Val Val Lys Gly Asp Asp Val Arg Gln Ile Ala Pro Gly  
385 390 395 400

Gln Thr Gly Val Ile Ala Asp Tyr Asn Tyr Lys Leu Pro Asp Asp Phe  
405 410 415

Met Gly Cys Val Leu Ala Trp Asn Thr Arg Asn Ile Asp Ala Thr Ser  
420 425 430

Thr Gly Asn Tyr Asn Tyr Lys Tyr Arg Tyr Leu Arg His Gly Lys Leu  
435 440 445

SEQLIST-20480.TXT

Arg Pro Phe Glu Arg Asp Ile Ser Asn Val Pro Phe Ser Pro Asp Gly  
450 455 460  
Lys Pro Cys Thr Pro Pro Ala Leu Asn Cys Tyr Trp Pro Leu Asn Asp  
465 470 475 480  
Tyr Gly Phe Tyr Thr Thr Thr Gly Ile Gly Tyr Gln Pro Tyr Arg Val  
485 490 495  
Val Val Leu Ser Phe Glu Leu Leu Asn Ala Pro Ala Thr Val Cys Gly  
500 505 510  
Pro Lys Leu Ser Thr Asp Leu Ile Lys Asn Gln Cys Val Asn Phe Asn  
515 520 525  
Phe Asn Gly Leu Thr Gly Thr Gly Val Leu Thr Pro Ser Ser Lys Arg  
530 535 540  
Phe Gln Pro Phe Gln Gln Phe Gly Arg Asp Val Ser Asp Phe Thr Asp  
545 550 555 560  
Ser Val Arg Asp Pro Lys Thr Ser Glu Ile Leu Asp Ile Ser Pro Cys  
565 570 575  
Ser Phe Gly Gly Val Ser Val Ile Thr Pro Gly Thr Asn Ala Ser Ser  
580 585 590  
Glu Val Ala Val Leu Tyr Gln Asp Val Asn Cys Thr Asp Val Ser Thr  
595 600 605  
Ala Ile His Ala Asp Gln Leu Thr Pro Ala Trp Arg Ile Tyr Ser Thr  
610 615 620  
Gly Asn Asn Val Phe Gln Thr Gln Ala Gly Cys Leu Ile Gly Ala Glu  
625 630 635 640  
His Val Asp Thr Ser Tyr Glu Cys Asp Ile Pro Ile Gly Ala Gly Ile  
645 650 655  
Cys Ala Ser Tyr His Thr Val Ser Leu Leu Arg Ser Thr Ser Gln Lys  
660 665 670  
Ser Ile Val Ala Tyr Thr Met Ser Leu Gly Ala Asp Ser Ser Ile Ala  
675 680 685  
Tyr Ser Asn Asn Thr Ile Ala Ile Pro Thr Asn Phe Ser Ile Ser Ile  
690 695 700  
Thr Thr Glu Val Met Pro Val Ser Met Ala Lys Thr Ser Val Asp Cys  
705 710 715 720  
Asn Met Tyr Ile Cys Gly Asp Ser Thr Glu Cys Ala Asn Leu Leu Leu  
725 730 735  
Gln Tyr Gly Ser Phe Cys Thr Gln Leu Asn Arg Ala Leu Ser Gly Ile  
740 745 750  
Ala Ala Glu Gln Asp Arg Asn Thr Arg Glu Val Phe Ala Gln Val Lys  
755 760 765  
Gln Met Tyr Lys Thr Pro Thr Leu Lys Tyr Phe Gly Gly Phe Asn Phe  
770 775 780

SEQLIST-20480.TXT

Ser Gln Ile Leu Pro Asp Pro Leu Lys Pro Thr Lys Arg Ser Phe Ile  
 785 790 795 800  
 Glu Asp Leu Leu Phe Asn Lys Val Thr Leu Ala Asp Ala Gly Phe Met  
 805 810 815  
 Lys Gln Tyr Gly Glu Cys Leu Gly Asp Ile Asn Ala Arg Asp Leu Ile  
 820 825 830  
 Cys Ala Gln Lys Phe Asn Gly Leu Thr Val Leu Pro Pro Leu Leu Thr  
 835 840 845  
 Asp Asp Met Ile Ala Ala Tyr Thr Ala Ala Leu Val Ser Gly Thr Ala  
 850 855 860  
 Thr Ala Gly Trp Thr Phe Gly Ala Gly Ala Ala Leu Gln Ile Pro Phe  
 865 870 875 880  
 Ala Met Gln Met Ala Tyr Arg Phe Asn Gly Ile Gly Val Thr Gln Asn  
 885 890 895  
 Val Leu Tyr Glu Asn Gln Lys Gln Ile Ala Asn Gln Phe Asn Lys Ala  
 900 905 910  
 Ile Ser Gln Ile Gln Glu Ser Leu Thr Thr Thr Ser Thr Ala Leu Gly  
 915 920 925  
 Lys Leu Gln Asp Val Val Asn Gln Asn Ala Gln Ala Leu Asn Thr Leu  
 930 935 940  
 Val Lys Gln Leu Ser Ser Asn Phe Gly Ala Ile Ser Ser Val Leu Asn  
 945 950 955 960  
 Asp Ile Leu Ser Arg Leu Asp Lys Val Glu Ala Glu Val Gln Ile Asp  
 965 970 975  
 Arg Leu Ile Thr Gly Arg Leu Gln Ser Leu Gln Thr Tyr Val Thr Gln  
 980 985 990  
 Gln Leu Ile Arg Ala Ala Glu Ile Arg Ala Ser Ala Asn Leu Ala Ala  
 995 1000 1005  
 Thr Lys Met Ser Glu Cys Val Leu Gly Gln Ser Lys Arg Val Asp Phe  
 1010 1015 1020  
 Cys Gly Lys Gly Tyr His Leu Met Ser Phe Pro Gln Ala Ala Pro His  
 1025 1030 1035 1040  
 Gly Val Val Phe Leu His Val Thr Tyr Val Pro Ser Gln Glu Arg Asn  
 1045 1050 1055  
 Phe Thr Thr Ala Pro Ala Ile Cys His Glu Gly Lys Ala Tyr Phe Pro  
 1060 1065 1070  
 Arg Glu Gly Val Phe Val Phe Asn Gly Thr Ser Trp Phe Ile Thr Gln  
 1075 1080 1085  
 Arg Asn Phe Phe Ser Pro Gln Ile Ile Thr Thr Asp Asn Thr Phe Val  
 1090 1095 1100  
 Ser Gly Asn Cys Asp Val Val Ile Gly Ile Ile Asn Asn Thr Val Tyr  
 1105 1110 1115 1120

SEQLIST-20480.TXT

Asp Pro Leu Gln Pro Glu Leu Asp Ser Phe Lys Glu Glu Leu Asp Lys  
1125 1130 1135

Tyr Phe Lys Asn His Thr Ser Pro Asp Val Asp Phe Gly Asp Ile Ser  
1140 1145 1150

Gly Ile Asn Ala Ser Val Val Asn Ile Gln Lys Glu Ile Asp Arg Leu  
1155 1160 1165

Asn Glu Val Ala Lys Asn Leu Asn Glu Ser Leu Ile Asp Leu Gln Glu  
1170 1175 1180

Leu Gly Lys Tyr Glu Gln Tyr Ile Lys Trp Pro Trp Tyr Val Trp Leu  
1185 1190 1195 1200

Gly Phe Ile Ala Gly Leu Ile Ala Ile Val Met Val Thr Ile Leu Leu  
1205 1210 1215

Cys Cys Met Thr Ser Cys Cys Ser Cys Leu Lys Gly Ala Cys Ser Cys  
1220 1225 1230

Gly Ser Cys Cys Lys Phe Asp Glu Asp Asp Ser Glu Pro Val Leu Lys  
1235 1240 1245

Gly Val Lys Leu His Tyr Thr  
1250 1255

<210> 11628  
<211> 5  
<212> PRT  
<213> SARS coronavirus

<400> 11628  
Pro Cys Ser Phe Gly  
1 5

<210> 11629  
<211> 5  
<212> PRT  
<213> SARS coronavirus

<400> 11629  
Pro Cys Ala Phe Gly  
1 5

<210> 11630  
<211> 221  
<212> PRT  
<213> SARS coronavirus

<400> 11630  
Met Ala Asp Asn Gly Thr Ile Thr Val Glu Glu Leu Lys Gln Leu Leu  
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Glu Gln Trp Asn Leu Val Ile Gly Phe Leu Phe Leu Ala Trp Ile Met  
20 25 30

Leu Leu Gln Phe Ala Tyr Ser Asn Arg Asn Arg Phe Leu Tyr Ile Ile  
35 40 45

Lys Leu Val Phe Leu Trp Leu Leu Trp Pro Val Thr Leu Ala Cys Phe  
50 55 60

SEQLIST-20480.TXT

Val Leu Ala Val Val Tyr Arg Ile Asn Trp Val Thr Gly Gly Ile Ala  
65 70 75 80  
Ile Ala Met Ala Cys Ile Val Gly Leu Met Trp Leu Ser Tyr Phe Val  
85 90 95  
Ala Ser Phe Arg Leu Phe Ala Arg Thr Arg Ser Met Trp Ser Phe Asn  
100 105 110  
Pro Glu Thr Asn Ile Leu Leu Asn Val Pro Leu Arg Gly Thr Ile Val  
115 120 125  
Thr Arg Pro Leu Met Glu Ser Glu Leu Val Ile Gly Ala Val Ile Ile  
130 135 140  
Arg Gly His Leu Arg Met Ala Gly His Ser Leu Gly Arg Cys Asp Ile  
145 150 155 160  
Lys Asp Leu Pro Lys Glu Ile Thr Val Ala Thr Ser Arg Thr Leu Ser  
165 170 175  
Tyr Tyr Lys Leu Gly Ala Ser Gln Arg Val Gly Thr Asp Ser Gly Phe  
180 185 190  
Ala Ala Tyr Asn Arg Tyr Arg Ile Gly Asn Tyr Lys Leu Asn Thr Asp  
195 200 205  
His Ala Gly Ser Asn Asp Asn Ile Ala Leu Leu Val Gln  
210 215 220

<210> 11631  
<211> 5  
<212> PRT  
<213> SARS coronavirus

<400> 11631  
Leu Ala Val Val Tyr  
1 5

<210> 11632  
<211> 5  
<212> PRT  
<213> SARS coronavirus

<400> 11632  
Leu Ala Ala Val Tyr  
1 5

<210> 11633  
<211> 397  
<212> PRT  
<213> SARS coronavirus

<400> 11633  
Met Ser Asp Asn Gly Pro Gln Ser Asn Gln Arg Ser Ala Pro Arg Ile  
1 5 10 15  
Thr Phe Gly Gly Pro Thr Asp Ser Thr Asp Asn Asn Gln Asn Gly Gly  
20 25 30  
Arg Asn Gly Ala Arg Pro Lys Gln Arg Arg Pro Gln Gly Leu Pro Asn  
35 40 45

SEQLIST-20480.TXT

Asn 50 Ile Ala Ser Trp Phe Thr 55 Ala Leu Thr Gln His 60 Gly Lys Glu Glu  
 Leu 65 Arg Phe Pro Arg 70 Gly Gln Gly Val Pro 75 Ile Asn Thr Asn Ser Gly 80  
 Pro Asp Asp Gln 85 Ile Gly Tyr Tyr Arg 90 Arg Ala Thr Arg Arg Val 95 Arg  
 Gly Gly Asp 100 Gly Lys Met Lys Glu 105 Leu Ser Pro Arg Trp Tyr 110 Phe Tyr  
 Tyr Leu 115 Gly Thr Gly Pro Glu 120 Ala Ser Leu Pro Tyr 125 Gly Ala Asn Lys  
 Glu 130 Gly Ile Val Trp Val 135 Ala Thr Glu Gly Ala 140 Leu Asn Thr Pro Lys  
 Asp 145 His Ile Gly Thr Arg 150 Asn Pro Asn Asn 155 Asn Ala Ala Thr Val 160 Leu  
 Gln Leu Pro Gln 165 Gly Thr Thr Leu Pro Lys 170 Gly Phe Tyr Ala Glu 175 Gly  
 Ser Arg Gly 180 Gly Ser Gln Ala Ser 185 Ser Arg Ser Ser Ser Arg 190 Ser Arg  
 Gly Asn 195 Ser Arg Asn Ser Thr 200 Pro Gly Ser Ser Arg 205 Gly Asn Ser Pro  
 Ala Arg 210 Met Ala Ser Gly Gly 215 Gly Glu Thr Ala 220 Leu Ala Leu Leu Leu  
 Leu 225 Asp Arg Leu Asn Gln 230 Leu Glu Ser Lys Val 235 Ser Gly Lys Gly Gln 240  
 Gln Gln Gln Gly 245 Gln Thr Val Thr Lys 250 Lys Ser Ala Ala Glu 255 Ala Ser  
 Lys Lys Pro 260 Arg Gln Lys Arg Thr 265 Ala Thr Lys Gln Tyr Asn 270 Val Thr  
 Gln Ala Phe 275 Gly Arg Arg Gly Pro 280 Glu Gln Thr Gln Gly 285 Asn Phe Gly  
 Asp Gln 290 Asp Leu Ile Arg Gln 295 Gly Thr Asp Tyr Lys 300 His Trp Pro Gln  
 Ile 305 Ala Gln Phe Ala Pro 310 Ser Ala Ser Ala Phe 315 Phe Gly Met Ser Arg 320  
 Ile Gly Met Glu 325 Val Thr Pro Ser Gly 330 Thr Trp Leu Thr Tyr His 335 Gly  
 Ala Ile Lys 340 Leu Asp Asp Lys Asp Pro 345 Gln Phe Lys Asp Asn 350 Val Ile  
 Leu Leu Asn 355 Lys His Ile Asp Ala 360 Tyr Lys Thr Phe Pro 365 Pro Thr Glu  
 Pro Lys 370 Lys Asp Lys Lys Lys 375 Lys Thr Asp Glu 380 Ala Gln Pro Leu Pro



SEQLIST-20480.TXT

Gln Arg Gln Lys Lys Gln Pro Thr Val Thr Leu Leu Pro  
385 390 395

<210> 11634  
<211> 5  
<212> PRT  
<213> SARS coronavirus

<400> 11634  
Asn Asn Ile Ala Ser  
1 5

<210> 11635  
<211> 5  
<212> PRT  
<213> SARS coronavirus

<400> 11635  
Asn Asn Thr Ala Ser  
1 5

<210> 11636  
<211> 2712  
<212> PRT  
<213> SARS coronavirus

<400> 11636  
Pro Thr Pro Arg Thr Leu Asp Ala Val Cys Gly Cys Ile Asn Val Phe  
1 5 10 15

Lys Arg Val Cys Gly Val Ser Ala Ala Arg Leu Thr Pro Cys Gly Thr  
20 25 30

Gly Thr Ser Thr Asp Val Val Tyr Arg Ala Phe Asp Ile Tyr Asn Glu  
35 40 45

Lys Val Ala Gly Phe Ala Lys Phe Leu Lys Thr Asn Cys Cys Arg Phe  
50 55 60

Gln Glu Lys Asp Glu Glu Gly Asn Leu Leu Asp Ser Tyr Phe Val Val  
65 70 75 80

Lys Arg His Thr Met Ser Asn Tyr Gln His Glu Glu Thr Ile Tyr Asn  
85 90 95

Leu Val Lys Asp Cys Pro Ala Val Ala Val His Asp Phe Phe Lys Phe  
100 105 110

Arg Val Asp Gly Asp Met Val Pro His Ile Ser Arg Gln Arg Leu Thr  
115 120 125

Lys Tyr Thr Met Ala Asp Leu Val Tyr Ala Leu Arg His Phe Asp Glu  
130 135 140

Gly Asn Cys Asp Thr Leu Lys Glu Ile Leu Val Thr Tyr Asn Cys Cys  
145 150 155 160

Asp Asp Asp Tyr Phe Asn Lys Lys Asp Trp Tyr Asp Phe Val Glu Asn  
165 170 175

Pro Asp Ile Leu Arg Val Tyr Ala Asn Leu Gly Glu Arg Val Arg Gln  
180 185 190

SEQLIST-20480.TXT

Ser Leu Leu Lys Thr Val Gln Phe Cys Asp Ala Met Arg Asp Ala Gly  
195 200 205  
Ile Val Gly Val Leu Thr Leu Asp Asn Gln Asp Leu Asn Gly Asn Trp  
210 215 220  
Tyr Asp Phe Gly Asp Phe Val Gln Val Ala Pro Gly Cys Gly Val Pro  
225 230 235 240  
Ile Val Asp Ser Tyr Tyr Ser Leu Leu Met Pro Ile Leu Thr Leu Thr  
245 250 255  
Arg Ala Leu Ala Ala Glu Ser His Met Asp Ala Asp Leu Ala Lys Pro  
260 265 270  
Leu Ile Lys Trp Asp Leu Leu Lys Tyr Asp Phe Thr Glu Glu Arg Leu  
275 280 285  
Cys Leu Phe Asp Arg Tyr Phe Lys Tyr Trp Asp Gln Thr Tyr His Pro  
290 295 300  
Asn Cys Ile Asn Cys Leu Asp Asp Arg Cys Ile Leu His Cys Ala Asn  
305 310 315 320  
Phe Asn Val Leu Phe Ser Thr Val Phe Pro Pro Thr Ser Phe Gly Pro  
325 330 335  
Leu Val Arg Lys Ile Phe Val Asp Gly Val Pro Phe Val Val Ser Thr  
340 345 350  
Gly Tyr His Phe Arg Glu Leu Gly Val Val His Asn Gln Asp Val Asn  
355 360 365  
Leu His Ser Ser Arg Leu Ser Phe Lys Glu Leu Leu Val Tyr Ala Ala  
370 375 380  
Asp Pro Ala Met His Ala Ala Ser Gly Asn Leu Leu Leu Asp Lys Arg  
385 390 395 400  
Thr Thr Cys Phe Ser Val Ala Ala Leu Thr Asn Asn Val Ala Phe Gln  
405 410 415  
Thr Val Lys Pro Gly Asn Phe Asn Lys Asp Phe Tyr Asp Phe Ala Val  
420 425 430  
Ser Lys Gly Phe Phe Lys Glu Gly Ser Ser Val Glu Leu Lys His Phe  
435 440 445  
Phe Phe Ala Gln Asp Gly Asn Ala Ala Ile Ser Asp Tyr Asp Tyr Tyr  
450 455 460  
Arg Tyr Asn Leu Pro Thr Met Cys Asp Ile Arg Gln Leu Leu Phe Val  
465 470 475 480  
Val Glu Val Val Asp Lys Tyr Phe Asp Cys Tyr Asp Gly Gly Cys Ile  
485 490 495  
Asn Ala Asn Gln Val Ile Val Asn Asn Leu Asp Lys Ser Ala Gly Phe  
500 505 510  
Pro Phe Asn Lys Trp Gly Lys Ala Arg Leu Tyr Tyr Asp Ser Met Ser  
515 520 525

SEQLIST-20480.TXT

Tyr Glu Asp Gln Asp Ala Leu Phe Ala Tyr Thr Lys Arg Asn Val Ile  
 530 535 540  
 Pro Thr Ile Thr Gln Met Asn Leu Lys Tyr Ala Ile Ser Ala Lys Asn  
 545 550 555 560  
 Arg Ala Arg Thr Val Ala Gly Val Ser Ile Cys Ser Thr Met Thr Asn  
 565 570 575  
 Arg Gln Phe His Gln Lys Leu Leu Lys Ser Ile Ala Ala Thr Arg Gly  
 580 585 590  
 Ala Thr Val Val Ile Gly Thr Ser Lys Phe Tyr Gly Gly Trp His Asn  
 595 600 605  
 Met Leu Lys Thr Val Tyr Ser Asp Val Glu Thr Pro His Leu Met Gly  
 610 615 620  
 Trp Asp Tyr Pro Lys Cys Asp Arg Ala Met Pro Asn Met Leu Arg Ile  
 625 630 635 640  
 Met Ala Ser Leu Val Leu Ala Arg Lys His Asn Thr Cys Cys Asn Leu  
 645 650 655  
 Ser His Arg Phe Tyr Arg Leu Ala Asn Glu Cys Ala Gln Val Leu Ser  
 660 665 670  
 Glu Met Val Met Cys Gly Gly Ser Leu Tyr Val Lys Pro Gly Gly Thr  
 675 680 685  
 Ser Ser Gly Asp Ala Thr Thr Ala Tyr Ala Asn Ser Val Phe Asn Ile  
 690 695 700  
 Cys Gln Ala Val Thr Ala Asn Val Asn Ala Leu Leu Ser Thr Asp Gly  
 705 710 715 720  
 Asn Lys Ile Ala Asp Lys Tyr Val Arg Asn Leu Gln His Arg Leu Tyr  
 725 730 735  
 Glu Cys Leu Tyr Arg Asn Arg Asp Val Asp His Glu Phe Val Asp Glu  
 740 745 750  
 Phe Tyr Ala Tyr Leu Arg Lys His Phe Ser Met Met Ile Leu Ser Asp  
 755 760 765  
 Asp Ala Val Val Cys Tyr Asn Ser Asn Tyr Ala Ala Gln Gly Leu Val  
 770 775 780  
 Ala Ser Ile Lys Asn Phe Lys Ala Val Leu Tyr Tyr Gln Asn Asn Val  
 785 790 795 800  
 Phe Met Ser Glu Ala Lys Cys Trp Thr Glu Thr Asp Leu Thr Lys Gly  
 805 810 815  
 Pro His Glu Phe Cys Ser Gln His Thr Met Leu Val Lys Gln Gly Asp  
 820 825 830  
 Asp Tyr Val Tyr Leu Pro Tyr Pro Asp Pro Ser Arg Ile Leu Gly Ala  
 835 840 845  
 Gly Cys Phe Val Asp Asp Ile Val Lys Thr Asp Gly Thr Leu Met Ile  
 850 855 860

SEQLIST-20480.TXT

Glu Arg Phe Val Ser Leu Ala Ile Asp Ala Tyr Pro Leu Thr Lys His  
 865 870 875 880  
 Pro Asn Gln Glu Tyr Ala Asp Val Phe His Leu Tyr Leu Gln Tyr Ile  
 885 890 895  
 Arg Lys Leu His Asp Glu Leu Thr Gly His Met Leu Asp Met Tyr Ser  
 900 905 910  
 Val Met Leu Thr Asn Asp Asn Thr Ser Arg Tyr Trp Glu Pro Glu Phe  
 915 920 925  
 Tyr Glu Ala Met Tyr Thr Pro His Thr Val Leu Gln Ala Val Ser Ala  
 930 935 940  
 Cys Val Leu Cys Asn Ser Gln Thr Ser Leu Arg Cys Gly Ala Cys Ile  
 945 950 955 960  
 Arg Arg Pro Phe Leu Cys Cys Lys Cys Cys Tyr Asp His Val Ile Ser  
 965 970 975  
 Thr Ser His Lys Leu Val Leu Ser Val Asn Pro Tyr Val Cys Asn Ala  
 980 985 990  
 Pro Gly Cys Asp Val Thr Asp Val Thr Gln Leu Tyr Leu Gly Gly Met  
 995 1000 1005  
 Ser Tyr Tyr Cys Lys Ser His Lys Pro Pro Ile Ser Phe Pro Leu Cys  
 1010 1015 1020  
 Ala Asn Gly Gln Val Phe Gly Leu Tyr Lys Asn Thr Cys Val Gly Ser  
 1025 1030 1035 1040  
 Asp Asn Val Thr Asp Phe Asn Ala Ile Ala Thr Cys Asp Trp Thr Asn  
 1045 1050 1055  
 Ala Gly Asp Tyr Ile Leu Ala Asn Thr Cys Thr Glu Arg Leu Lys Leu  
 1060 1065 1070  
 Phe Ala Ala Glu Thr Leu Lys Ala Thr Glu Glu Thr Phe Lys Leu Ser  
 1075 1080 1085  
 Tyr Gly Ile Ala Thr Val Arg Glu Val Leu Ser Asp Arg Glu Leu His  
 1090 1095 1100  
 Leu Ser Trp Glu Val Gly Lys Pro Arg Pro Pro Leu Asn Arg Asn Tyr  
 1105 1110 1115 1120  
 Val Phe Thr Gly Tyr Arg Val Thr Lys Asn Ser Lys Val Gln Ile Gly  
 1125 1130 1135  
 Glu Tyr Thr Phe Glu Lys Gly Asp Tyr Gly Asp Ala Val Val Tyr Arg  
 1140 1145 1150  
 Gly Thr Thr Thr Tyr Lys Leu Asn Val Gly Asp Tyr Phe Val Leu Thr  
 1155 1160 1165  
 Ser His Thr Val Met Pro Leu Ser Ala Pro Thr Leu Val Pro Gln Glu  
 1170 1175 1180  
 His Tyr Val Arg Ile Thr Gly Leu Tyr Pro Thr Leu Asn Ile Ser Asp  
 1185 1190 1195 1200

SEQLIST-20480.TXT

Glu Phe Ser Ser Asn Val Ala Asn Tyr Gln Lys Val Gly Met Gln Lys  
1205 1210 1215

Tyr Ser Thr Leu Gln Gly Pro Pro Gly Thr Gly Lys Ser His Phe Ala  
1220 1225 1230

Ile Gly Leu Ala Leu Tyr Tyr Pro Ser Ala Arg Ile Val Tyr Thr Ala  
1235 1240 1245

Cys Ser His Ala Ala Val Asp Ala Leu Cys Glu Lys Ala Leu Lys Tyr  
1250 1255 1260

Leu Pro Ile Asp Lys Cys Ser Arg Ile Ile Pro Ala Arg Ala Arg Val  
1265 1270 1275 1280

Glu Cys Phe Asp Lys Phe Lys Val Asn Ser Thr Leu Glu Gln Tyr Val  
1285 1290 1295

Phe Cys Thr Val Asn Ala Leu Pro Glu Thr Thr Ala Asp Ile Val Val  
1300 1305 1310

Phe Asp Glu Ile Ser Met Ala Thr Asn Tyr Asp Leu Ser Val Val Asn  
1315 1320 1325

Ala Arg Leu Arg Ala Lys His Tyr Val Tyr Ile Gly Asp Pro Ala Gln  
1330 1335 1340

Leu Pro Ala Pro Arg Thr Leu Leu Thr Lys Gly Thr Leu Glu Pro Glu  
1345 1350 1355 1360

Tyr Phe Asn Ser Val Cys Arg Leu Met Lys Thr Ile Gly Pro Asp Met  
1365 1370 1375

Phe Leu Gly Thr Cys Arg Arg Cys Pro Ala Glu Ile Val Asp Thr Val  
1380 1385 1390

Ser Ala Leu Val Tyr Asp Asn Lys Leu Lys Ala His Lys Asp Lys Ser  
1395 1400 1405

Ala Gln Cys Phe Lys Met Phe Tyr Lys Gly Val Ile Thr His Asp Val  
1410 1415 1420

Ser Ser Ala Ile Asn Arg Pro Gln Ile Gly Val Val Arg Glu Phe Leu  
1425 1430 1435 1440

Thr Arg Asn Pro Ala Trp Arg Lys Ala Val Phe Ile Ser Pro Tyr Asn  
1445 1450 1455

Ser Gln Asn Ala Val Ala Ser Lys Ile Leu Gly Leu Pro Thr Gln Thr  
1460 1465 1470

Val Asp Ser Ser Gln Gly Ser Glu Tyr Asp Tyr Val Ile Phe Thr Gln  
1475 1480 1485

Thr Thr Glu Thr Ala His Ser Cys Asn Val Asn Arg Phe Asn Val Ala  
1490 1495 1500

Ile Thr Arg Ala Lys Ile Gly Ile Leu Cys Ile Met Ser Asp Arg Asp  
1505 1510 1515 1520

Leu Tyr Asp Lys Leu Gln Phe Thr Ser Leu Glu Ile Pro Arg Arg Asn  
1525 1530 1535

SEQLIST-20480.TXT

Val Ala Thr Leu Gln Ala Glu Asn Val Thr Gly Leu Phe Lys Asp Cys  
1540 1545 1550

Ser Lys Ile Ile Thr Gly Leu His Pro Thr Gln Ala Pro Thr His Leu  
1555 1560 1565

Ser Val Asp Ile Lys Phe Lys Thr Glu Gly Leu Cys Val Asp Ile Pro  
1570 1575 1580

Gly Ile Pro Lys Asp Met Thr Tyr Arg Arg Leu Ile Ser Met Met Gly  
1585 1590 1600

Phe Lys Met Asn Tyr Gln Val Asn Gly Tyr Pro Asn Met Phe Ile Thr  
1605 1610 1615

Arg Glu Glu Ala Ile Arg His Val Arg Ala Trp Ile Gly Phe Asp Val  
1620 1625 1630

Glu Gly Cys His Ala Thr Arg Asp Ala Val Gly Thr Asn Leu Pro Leu  
1635 1640 1645

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